Wednesday, January 4, 2023
Development Review Committee

DEVELOPMENT REVIEW COMMITTEE AGENDA
PUBLIC NOTICE is hereby given that the Development Review Committee of Spanish Fork, Utah, will hold a regular meeting at the Spanish Fork City Council Chamber, 40 South Main Street, Spanish Fork, Utah, commencing at 10:00 a.m. This meeting is not available to attend virtually.

1. Approval of Minutes

A. December 21, 2022

2. Minor Plat Amendment

A. SPENCER PETERSON. The proposal involves amending two lots with existing single-family residences located at 1555 East 100 South in the Sunny Ridge Subdivision.

3. Site Plan

A. TAKE 5 EXPRESS CAR WASH. The proposal involves commercial redevelopment of a property for a car wash to be located at 891 North Main Street.

B. VOLUNTEER DRIVE EAST IMPROVEMENTS. The proposal involves the extension of Volunteer Drive from Main Street to 200 East.

C. SPANISH FORK PARKWAY SR-51 CONNECTOR. The proposal involves the connection of Spanish Fork Parkway to SR-51.

4. Title 15 Amendments

A. TITLE 15 AMENDMENTS - LANDSCAPING. The proposal involves various amendments to Municipal Code regarding Title 15 landscaping requirements.

5. Adjourn

Draft Minutes
Spanish Fork City Development Review Committee
40 South Main Street
Spanish Fork, Utah
December 21, 2022

Staff Members Present: Seth Perrins, City Manager; **Dave Anderson**, Community Development Director; **Brandon Snyder**, City Planner; **Kimberly Brenneman**, Development Coordination Manager; **Vaughn Pickell**, City Attorney; **Ana Burgi**, Assistant City Attorney; **John Little**, Chief Building Official; **Michael Clark**, Assistant City Engineer; **Marcie Clark,** Department Development Secretary; **Jered Johnson**, Engineering Division Manager; **Zach Hendrickson**, Outside Plant Manager; **Jake Theurer**, Power and Light Superintendent; **Tom Cooper**, Power and Light Senior Utility Planner; **Bart Morrill**, Parks Maintenance Supervisor; **Kasey Woodard**, Division Secretary.

Citizens Present: Dan Fechner, Mike Ford, Brandon Lunden, Scott Peterson, Gavin West, Sam Drown, Randy Smith, Robert Lusk.

Chris Thompson called the meeting to order at 10:15 a.m.

MINUTES
December 14, 2022

Vaughn Pickell **moved** to approve the minutes of December 14, 2022.

Seth Perrins **seconded** and the motion **passed** all in favor.

CONDITIONAL USE PERMIT
150 SOUTH 2022 AT&T CELL TOWER MODIFICATION
Brandon Snyder gave a brief update on the proposal and stated the applicant is looking to swap out equipment and update the tower.

Vaughn Pickell **moved** to recommend the approval of the proposed 150 South 2022 AT&T Cell Tower Modification Conditional Use Permit to Planning Commission based on the following finding and conditions:

Finding:

1. That the project conforms to the City's General Plan Land Use Designation and Zoning Map.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

Jake Theurer **seconded** and the motion **passed** all in favor.

CONDITIONAL USE PERMIT

300 EAST 2022 AT&T CELL TOWER MODIFICATION

Brandon Snyder gave a brief update on the proposal and stated the applicant is looking to update the antennas on the tower.

Jake Theurer **moved** to recommend the approval of the proposed 300 East 2022 AT&T Cell Tower Modification Conditional Use Permit to Planning Commission based on the following finding and conditions:

Finding:

1. That the project conforms to the City's General Plan Land Use Designation and Zoning Map.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

John Little **seconded** and the motion **passed** all in favor.

CONDITIONAL USE PERMIT

300 EAST 2022 T-MOBILE CELL TOWER GENERATOR MODIFICATION

Brandon Snyder stated the applicant is looking to add an emergency backup generator as the existing one is for a backup for a different carrier. He gave the location of the proposed generator and that it would be located on the trail side and he stated there will be fencing modifications needed.

Vaughn Pickell asked if there is any additional land area needed and it was stated yes there is additional land area needed for the proposal.

Seth Perrins stated as the City is the land owner, he does not like manipulating the trail space and suggests exploring the open space behind the trail instead of moving the trail.

Dave Anderson suggests continuing this proposal until this can be discussed further with the Parks and Recreation Department about the configuration. He stated staff will be looking for a sign off from the parks department before anything can move forward. He feels minimizing the footprint on the City park space will be best.

Tom Cooper stated the reason this location was selected was to avoid conflict with neighboring generators and stated he would like to see a concrete wall surrounding the generator and it was stated that can be up to the parks and recreation department.

There was a discussion about whether a concrete wall or a chain link fence will be adequate. There was concern of defacement of the concrete wall being in a public area.

Seth Perrins **moved** to Continue the proposed 300 East 2022 T-Mobile Cell Tower Generator Modification Conditional Use Permit.

Jake Theurer **seconded** and the motion **passed** all in favor.

SITE PLAN

DUTCH BROS COFFEE

Dave Anderson stated there needs to be some redesign with the plan and suggested the applicant work with the City Engineering office. He stated there are a few significant issues that need to be corrected before this proposal can move forward. He stated the property owners do have enough parking spaces left over to still meet their own parking requirements as well as the parking requirements for the proposed site for Dutch Bros Coffee.

Seth Perrins discussed the subject of patrons using the parking lot owned by AmSource (Macey's) in the past for Itinerant merchant sales of Christmas Tree sales and other Itinerant merchant sellers.

There was a discussion regarding parking requirements and available spaces that can be utilized by those itinerant merchant sellers.

John Little **moved** to Continue the proposed Dutch Bros Coffee Site Plan.

Seth Perrins **seconded** and the motion **passed** all in favor.

SITE PLAN

MOUNTAIN COUNTRY FOODS PLANT 1 ADDITION

Dave Anderson stated this is very straight forward approval and is a matter of engineering issues.

Michael Clark stated there are no other concerns but states there are some drainage concerns that are being worked out. He stated the plan could do with less ponds. There was discussion on the storm tanks and things being placed under them. It was stated the storm water will filter into the ponds instead of underground storm tanks. There was further discussion on moving the meters.

Seth Perrins asked how long the power would be out and Jake Theurer stated it would be very minimal, 4 hours at the most.

There was discussion regarding the remaining work that needs to be completed before permits can be issued. Marcie Clark in engineering stated bonds and fees need to be paid before a precon meeting can be scheduled and then the building permits can then be issued.

Seth Perrins made the additional comment of having the applicant potentially move the adjustment. He stated this adjustment will make the campus better and more capable of easier future expansions.

Jake Theurer **moved** to approve the proposed Mountain Country Foods Plant 1 Addition Site Plan based on the following finding and conditions:

Finding:

1. That the project conforms to the City's General Plan Land Use Designation and Zoning Map.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

Seth Perrins **seconded** and the motion **passed** all in favor.

FINAL PLAT

ANNIE'S ACRES PLAT C

Dave Anderson stated this plat is somewhat connected to the Annie's Acres plat.

Brandon Snyder stated he did not include any conditions specific to the Volunteer Drive improvements as his understanding is that Volunteer Drive is moving forward. He stated he noticed them on the River Run staff reports, so he feels that it is more than appropriate to make reference to them if the DRC feels it appropriate.

Vaughn Pickell stated the property owner to the west of River Run, Two Pesos, has signed an agreement allowing the City to occupy and construct Volunteer Drive and be open to the public to drive. He stated they are wishing to challenge the city's acquisition; he states the City can reach an agreement or the City can do eminent domain. He stated the City has unlimited right to construct and the right to occupy and open to the public for travel.

Jake Theurer stated the road and utilities need to be constructed before power can be provided to the homes.

There was a discussion regarding the potential issue with the ribbon road and the two different descriptions on the easement.

Vaughn Pickell stated there will need to be an easement signed by Two Pesos.

Dave Anderson asked who should be responsible to build the road before the homes can be occupied? He stated it is typically a condition of approval that the applicant must front the cost of the road and he asked Sam Drown if he was comfortable fronting the cost.

Sam Drown stated they understand this is a condition of approval and asked what is needed to move forward and finalize their plats.

Dave Anderson stated the City is leery of starting something that can't be finished before occupancy is wanted.

Vaughn Pickell **moved** to approve the proposed Annie's Acres Plat C Final Plat based on the following finding and conditions:

Finding:

1. That the application conforms to the City's General Plan Designation and Zoning Map.
2. That the application is consistent with the approved Preliminary Plat

Conditions:

1. That the applicant meets the City's Construction Standards and zoning requirements.
2. That the applicant addresses any red-lines.
3. That the applicant addresses any previous conditions or approvals.
4. No Certificate of Occupancy may be granted until the connection for Volunteer Drive can be connected to Main Street and opened to the public.
5. The traffic signal at Main Street will be constructed along with this project.
6. A utility easement beyond the boundary of the ribbon road be provided for the power and the utilities.

Jered Johnson **seconded** and the motion **passed** all in favor.

FINAL PLAT

RIVER RUN TOWNHOMES PLAT C

Dave Anderson spoke briefly about these two plats being somewhat connected by Volunteer Drive, and stated there is an amended plat that needs to be recorded due to a discrepancy.

Travis Warren the City Surveyor stated the County will not record this as it is currently.

Sam Drown stated they are turning this matter over to their attorney they have hired as he feels the County is being unreasonable and unwilling to work with them.

There was discussion regarding what the County is requiring regarding the descriptions that are being recorded on the plats. It was stated that phase 1 contained descriptions that were regarding the previous footprint of the housing product. There was further discussion of the porches extending into common areas and being outside of the line work of the "boxes".

Sam Drown stated this will not be an issue with the future phases as they have addressed the concern. He states this will only be a concern for Plat A.

Brandon Snyder stated the reapproval and the phase 2 approval have since expired so there will need to be reapprovals for those expired approvals.

Dave Anderson stated this should be fairly easy and suggested these reapprovals for the January 4, 2023 DRC agenda.

There was a discussion of the approval process, fees and the conditions of approval that will be required.

Sam Drown stated the holdup has not been with Spanish Fork City, he feels the holdup is within Utah County.

Vaughn Pickell stated that he is happy to work with the applicant and Utah County to help move things forward.

Vaughn Pickell **moved** to approve the proposed River Run Townhomes Plat C Final Plat based on the following finding and conditions:

Finding:

1. That the application conforms to the City's General Plan Designation and Zoning Map.
2. That the application is consistent with the approved Preliminary Plat.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.
3. That the applicant meets the conditions of previous approvals and agreements.
4. That the applicant provides the required access and utility connections for the development.
5. That the earlier phases be reapproved and recorded.
6. That the Volunteer Drive plans be approved.
7. That no Certificate of Occupancy may be granted until the connection for Volunteer Drive can be connected to Main Street and opened to the public.
8. The traffic signal at Main Street will be constructed along with this project.
9. A utility easement beyond the boundary of the ribbon road be provided for the power and the utilities.

Jake Theurer **seconded** and the motion **passed** all in favor.

FINAL PLAT

JOHNSON SUBDIVISION PLAT A

Dave Anderson stated this is a reapproval due to an expiration and stated this should be fairly straight forward.

Brandon Snyder stated there have been a few minor updates to the prior approval.

There was discussion regarding the unused metal building. It was stated there has been no construction started as of yet. There was further discussion regarding expiration dates on the Preliminary Plat that will expire in August of 2023.

Vaughn Pickell **moved** to approve the proposed Johnson Subdivision Plat A Final Plat based on the following finding and conditions:

Finding:

1. That the proposal conforms to the City's General Plan Designation and Zoning Map.
2. That the proposal is consistent with the approved Preliminary Plat.

Conditions:

1. That the applicant addresses red-lines.

Seth Perrins **seconded** and the motion **passed** all in favor.

TITLE 12 AMENDMENTS

CONSTRUCTION SITE MAINTENANCE AND CLEANUP

Ana Burgi gave a brief definition of the proposed changes to the amendments on preventing construction debris and trash from escaping construction sites and spreading to neighboring properties or public right of ways, and stated this can be a violation is a Class C Misdemeanor.

Seth Perrins spoke briefly on why these amendment changes are necessary in order to protect adjacent properties from neighboring construction site trash and waste spreading to public and private properties.

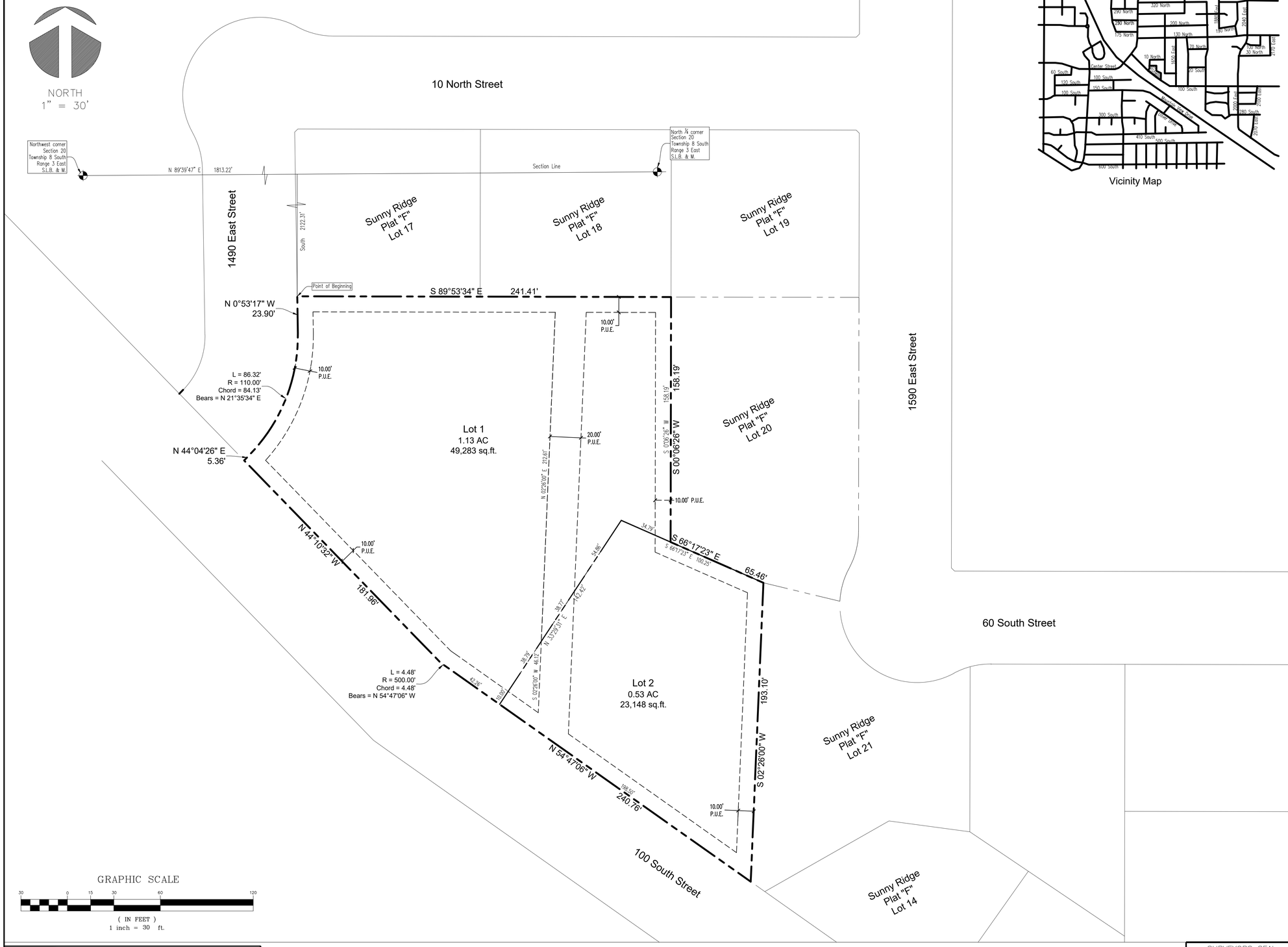
Jake Theurer **moved** to recommend the approval of the proposed Title 12 Amendments to City Council as discussed.

Seth Perrins **seconded** and the motion **passed** all in favor.

Jake Theurer moved to adjourn the meeting at 11:30 a.m.

Adopted:

Kasey Woodard
Community Development Division
Secretary



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Vicinity Map

Surveyor's Certificate

I, _____, do hereby certify that I am a registered Land Surveyor and that I hold a license, Certificate No. _____, in accordance with the Professional Engineers and Land Surveyors Licensing Act found in Title 58, Chapter 22 of the Utah Code. I further certify that by authority of the owners, I have made a survey of the tract of land shown on this plat and described below, have subdivided said tract of land into lots, streets, and easements, have completed a survey of the property described on this plat in accordance with Utah Code Section 17-23-17, have verified all measurements, and have placed monuments as represented on the plat. I further certify that every existing right-of-way and easement grant of record for underground facilities, as defined in Utah Code Section 54-8a-2, and for other utility facilities, is accurately described on this plat, and that this plat is true and correct to the best of my knowledge.

Boundary Description

Commencing at a point located North 89°39'27" East along the Section line 1813.22 feet and South 2122.31 feet from the Northwest corner of Section 20, Township 8 South, Range 3 East, Salt Lake Base and Meridian; thence along Plat "F", Sunny Ridge Subdivision the following 4 courses: South 89°53'34" East 241.41 feet, South 00°06'26" West 158.19 feet, South 66°17'23" East 65.46 feet, South 02°26'00" West 193.10 feet; thence along 100 South Street the following 3 courses: North 54°47'06" West 240.76 feet, along the arc of a 500.00 foot radius curve to the right 4.48 feet (chord bears North 54°47'06" West 4.48 feet), North 44°10'32" West 181.96 feet; thence along 1490 East Street the following 3 courses: North 44°04'26" East 5.36 feet, along the arc of a 110.00 foot radius curve to the left 86.32 feet (chord bears North 21°35'34" East 84.13 feet), North 00°53'17" West 23.90 feet to the point of beginning.

AREA=72,431 sq. ft. or 1.66 acres

Owner's Dedication

Know all men by these presents that we, all of the undersigned owners of all the property described in the Surveyor's Certificate hereon and shown on this map, have caused the same to be subdivided into Lots, Blocks, Streets, and Easements and do hereby dedicated the streets and other Public areas as indicated hereon for perpetual use of the public.

In witness hereof we have hereunto set our hands this _____ day of _____, A.D. 20___.

_____ _____
_____ _____
_____ _____

Acknowledgement

STATE OF UTAH } S.S.
COUNTY OF UTAH }

The foregoing instrument was acknowledged before me this_____day of_____, 20____, by _____, who represented that he is the _____ of the _____ and has the authority to execute this instrument.

My Commission Number _____ _____
Signed (a Notary Public Commissioned in Utah)

My Commission Expires _____ _____
Print name of Notary

Acceptance by the City of Spanish Fork City

Approved this_____day of_____, 20_____, by Spanish Fork City, approves this subdivision and hereby accepts the dedication of all Streets, Easements, and other Parcels of land intended for public purposes for the perpetual use of the public. The City recognizes that this plat clarifies ownership of property with the dedication shown hereon this_____day of_____, A.D. 20____.

Approved: _____ Approved: _____
City Engineer City Recorder

Planning Commission Approval

Approved this _____ day of _____ , 20____, by the Spanish Fork City Planning Commission.

_____ _____
Director-Secretary Chairman, Planning Commission

County Recorder

Plat " J "

Sunny Ridge

Including a vacation of Lots 15 & 16, Plat "F"
Sunny Ridge a Residential Subdivision

SPANISH FORK CITY_____Subdivision_____ UTAH COUNTY, UTAH

SCALE: 1" = 30 Feet

Prepared by:

Dudley and Associates, Inc.
353 East 1200 South
Orem, Utah 84058
office 801-224-1252
fax 801-224-1264

SURVEYORS SEAL	NOTARY PUBLIC SEAL	CIVIL ENGINEERS SEAL	CLERK-RECORDER SEAL

SITE DEVELOPMENT PLANS FOR

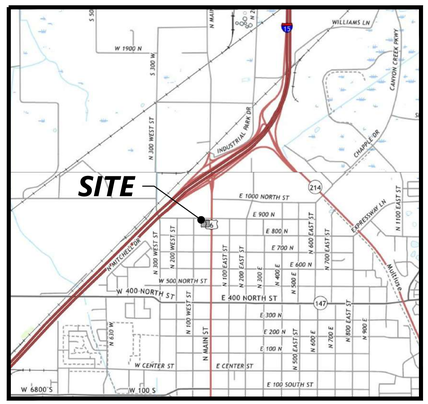
TAKE FIVE EXPRESS CAR WASH

891 N. MAIN ST.,
SPANISH FORK, UT 84660

ZONING - C2

SHEET INDEX

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LOCATION MAP
1" = 2000'

OWNER/DEVELOPER:

DRIVEN BRANDS, INC.

CONTACT: MATTHEW A. GILBERT
4410 SOUTH CHURCH STREET, SUITE 700
CHARLOTTE, NC 28202
(980) 259-0701

ENGINEER:

JM CIVIL ENGINEERING

CONTACT: JOHN MEASELS, PE (ENGINEER)
1101 CENTRAL EXPRESSWAY SOUTH, SUITE 215
ALLEN, TX 75013
JMEASELS@JMCIVILENG.COM
(214) 491-1830

SURVEYOR:

JM CIVIL ENGINEERING

CONTACT: SCOTT BERGHERR, RPLS, PLS
1101 CENTRAL EXPRESSWAY SOUTH, SUITE 215
ALLEN, TX 75013
SBERGHERR@JMCIVILENG.COM
(214) 491-1830

UTILITY CONTACTS

ENGINEER
CITY OF SPANISH FORK
JERED JOHNSON
40 S. MAIN ST., STE. 240
SPANISH FORK, UT 84660
TEL: (801) 804-4575

ELECTRIC
CITY OF SPANISH FORK
TOM COOPER
40 S. MAIN ST., OFFICE 210
SPANISH FORK, UT 84660
TEL: (801) 804-4430

GAS
DOMINION ENERGY
JADEN GEETING
1640 N. MOUNTAIN SPRINGS PKWY.,
SPRINGVILLE, UT 84663
TEL: (385) 290-7428

WASTEWATER
CITY OF SPANISH FORK
CORY PIERCE
40 S. MAIN ST., OFFICE 210
SPANISH FORK, UT 84660
TEL: (801) 804-4466

STORMWATER
CITY OF SPANISH FORK
MICHAEL CLARK
40 S. MAIN ST., OFFICE 210
SPANISH FORK, UT 84660
TEL: (801) 804-4552

WATER
CITY OF SPANISH FORK
PAUL TAYLOR
40 S. MAIN ST., OFFICE 210
SPANISH FORK, UT 84660
TEL: (801) 804-4458

TELEPHONE/INTERNET
CITY OF SPANISH FORK
BRIAN PERRY
65 SOUTH 630 W.
SPANISH FORK, UT 84660
TEL: (801) 804-4503

FIRE
CITY OF SPANISH FORK
JASON TURNER
40 S. MAIN ST.,
SPANISH FORK, UT 84660
TEL: (801) 804-4755

CAUTION NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 7 DAYS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

BENCHMARKS

TBM #1: AN "X" CUT ON TOP OF CONCRETE PAVING WITHIN N. MAIN STREET RIGHT-OF-WAY, LOCATED NEAR THE EAST PROPERTY LINE, APPROXIMATELY 2 FEET EAST AND 14 FEET SOUTH OF A SIGN POST. ELEVATION=4561.80 FEET.

TBM #2: AN "X" CUT ON TOP OF A CONCRETE BACK OF CURB LOCATED WITHIN THE SUBJECT PROPERTY NEAR THE WEST PROPERTY LINE AND LOCATED APPROXIMATELY 19 FEET WEST AND 39 FEET NORTH OF A POWER POLE. ELEVATION=4563.71 FEET.

FLOODNOTE

ACCORDING TO THE F.I.R.M. NO. 49049C0757F, THE SUBJECT PROPERTY LIES IN ZONE X AND DOES NOT LIE WITHIN A FLOOD PRONE HAZARD AREA, PER MAP REVISION DATED JUNE 19, 2020.

Know what's **below.** **Call** before you dig.

THIRD SUBMITTAL
DATE: 12/05/22

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
12/05/22

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	POM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

COVER SHEET

C 001

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 12:28 PM PHIL MINTON

GENERAL SITE NOTES:

1. PRIOR TO STARTING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION SHALL BEGIN UNTIL ALL PERMITS HAVE BEEN RECEIVED.
2. SITE BOUNDARY, TOPOGRAPHY, UTILITY AND ROAD INFORMATION WAS TAKEN FROM A SURVEY BY JM CIVIL ENGINEERING, 1101 CENTRAL EXPRESSWAY SOUTH, SUITE 215, ALLEN, 75 75013. CONTACT: SCOTT BERGHERR (214) 491–1830.
3. IF THE CONTRACTOR, IN THE COURSE OF THE WORK, FINDS ANY DISCREPANCIES BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS OF THE LOCALITY, OR ANY ERRORS OR OMISSIONS IN THE PLANS OR IN THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO IMMEDIATELY INFORM THE ENGINEER, IN WRITING, AND THE ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH A DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTOR'S RISK.
4. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS, AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
6. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE STATE AND LOCAL GOVERNMENT AGENCY LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS.
7. ALL ACCESSIBLE SITE FEATURES SHALL BE CONSTRUCTED TO MEET ALL FEDERAL, STATE AND LOCAL CODE.
8. NOTIFY THE CITY INSPECTOR TWENTY–FOUR (24) HOURS BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
9. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS, AND STAKES.
10. ARCHITECTURAL PLANS ARE TO BE USED FOR BUILDING STAKE OUT.
11. ALL DIMENSIONS ARE FROM FACE OF BUILDING, CURB, AND WALL UNLESS OTHERWISE SPECIFIED ON PLANS.
12. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
13. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATION.
14. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
15. FOR WORK IN, OR ADJACENT TO, HIGHWAY RIGHT OF WAYS, CONTRACTOR SHALL ENSURE APPROPRIATE PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION. CONTRACTOR TO ERECT AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES IN CONFORMANCE WITH THE STATE MANUAL OF TRAFFIC CONTROL DEVICES, LATEST EDITION, ALONG WITH THE REQUIREMENTS OF THE LOCAL D.O.T. AREA OFFICE.
16. ALL CURB RADII SHALL BE 3' OR 10' UNLESS OTHERWISE NOTED ON THE PLANS.
17. DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

GENERAL UTILITY NOTES:

1. CONTRACTOR IS TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND ENSURE NO CONFLICTS EXIST WITH PROPOSED IMPROVEMENTS. NOTIFY ENGINEER IMMEDIATELY IF UTILITIES ARE LOCATED DIFFERENTLY THAN SHOWN. THE CONTRACTOR SHALL COORDINATE WITH EACH RESPECTIVE UTILITY COMPANY IN ORDER TO RELOCATE IF NEEDED IN CONFORMANCE WITH THEIR GUIDELINES.
2. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO THE REMOVAL OF INDICATED UTILITIES ON SITE (SEE DEMOLITION PLAN). CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS REQUIRED FOR DEMOLITION AND HAUL OFF FROM THE APPROPRIATE AUTHORITIES.
3. AUTHORIZATION MUST BE OBTAINED FROM THE LOCAL JURISDICTION WATER SYSTEM TO CONSTRUCT, ALTER OR MODIFY A WATER OR SEWER LINE. CONSTRUCTION OF WATER AND SEWER INFRASTRUCTURE WILL BE AUTHORIZED BY THE WATER SYSTEM UPON:
   - APPROVAL OF SUBMITTED PLANS.
   - NOTIFICATION OF THE WATER SYSTEM AT LEAST 24 HOURS PRIOR TO STARTING CONSTRUCTION.
4. AT THE COMPLETION OF THE WATER AND/OR SEWER CONSTRUCTION AND PRIOR TO RECORDING THE FINAL PLAT, THE CONTRACTOR WILL FURNISH THE WATER SYSTEM INSPECTOR RECORD DRAWINGS OF THE PROJECT.
5. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE GAS COMPANY FOR THE CONSTRUCTION OF THE GAS LINE BETWEEN METER AND MAIN.
6. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE POWER COMPANY FOR THE CONSTRUCTION OF ELECTRICAL CONDUIT TO PROVIDE SERVICE TO THE TRANSFORMER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING, PRIOR TO CONSTRUCTION, ALL EXISTING LOCATIONS AND INVERT ELEVATIONS OF SANITARY SEWERS, STORM DRAINAGE, AND WATER MAINS. IF ANY INVERT ELEVATION VARIES MORE THAN 0.1 FT. FROM RECORD ELEVATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. WORK SHALL NOT PROCEED UNTIL THE CONTRACTOR IS NOTIFIED BY THE ENGINEER.
8. CONNECT TO EXISTING UTILITIES AND INSTALL UTILITIES IN COMPLIANCE WITH REQUIREMENTS OF APPROPRIATE JURISDICTIONAL AGENCIES.
9. COORDINATE WITH BUILDING PLANS TO ASSURE ACCURACY OF UTILITY CONNECTIONS AND COMPLIANCE WITH LOCAL CODES.
10. ALL SEWERS TO BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING CLEANING OF ANY SILT OR DEBRIS ACCUMULATED IN STRUCTURES.
11. ALL SURPLUS EXCAVATED MATERIAL FROM THE TRENCH SHALL BE DISPOSED OFF THE SITE BY CONTRACTOR.
12. COORDINATE EXACT TRENCHING, ROUTING, AND POINT OF TERMINATION WITH ALL UTILITY COMPANIES.
13. MINIMUM SEPARATION BETWEEN WATER AND SANITARY SEWER LINES SHALL BE A MINIMUM OF 10' HORIZONTALLY AND 18" VERTICALLY.

GENERAL EROSION CONTROL NOTES:

1. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND BECOME FAMILIAR WITH UPDES PERMIT UTR090000 PLAN AND ITS CONTENTS.
2. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
3. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
4. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
5. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
6. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
7. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
8. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READLY AVAILABLE TO CONTAIN AND CLEAN–UP FUEL OR CHEMICAL SPILLS AND LEAKS.
9. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
10. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
11. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN SHALL BE INITIATED AS SOON AS PRACTICABLE.
12. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
13. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
14. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
15. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
16. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
17. ON–SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
18. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION. SLOPES LEFT EXPOSED WILL, WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.
19. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.
20. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

GENERAL DEMOLITION NOTES:

1. ANY DEMOLITION IS TO BE PERFORMED IN STRICT CONFORMANCE WITH ALL APPLICABLE CITY, COUNTY AND STATE, AND/OR GOVERNING BODY'S STANDARDS.
2. THE DEMOLITION PLAN SHALL BE DONE IN CONJUNCTION WITH THE GEOTECHNICAL INVESTIGATION REPORT.
3. EROSION AND SEDIMENT CONTROL MEASUREMENTS SHALL BE MAINTAINED AT ALL TIMES DURING DEMOLITION.
4. THE PURPOSE OF THIS DRAWING IS TO CONVEY THE OVERALL SCOPE OF WORK AND IT IS NOT INTENDED TO COVER ALL DETAILS OR SPECIFICATIONS REQUIRED TO COMPLY WITH GENERALLY ACCEPTED DEMOLITION PRACTICES. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE SITE, SCOPE OF WORK, AND ALL EXISTING CONDITIONS AT THE JOB SITE PRIOR TO BIDDING AND COMMENCING THE WORK. THE DEMOLITION CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, OR PROCEDURES USED TO COMPLETE THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND IS LIABLE FOR THE SAFETY OF THE PUBLIC OR CONTRACTOR'S EMPLOYEES DURING THE COURSE OF THE PROJECT.
5. THE DEMOLITION PLAN IS INTENDED TO SHOW REMOVAL OF KNOWN SITE FEATURES AND UTILITIES AS SHOWN ON THE SURVEY. THERE MAY BE OTHER SITE FEATURES, UTILITIES, STRUCTURES, AND MISCELLANEOUS ITEMS BOTH BURIED AND ABOVE GROUND THAT ARE WITHIN THE LIMITS OF WORK THAT MAY NEED TO BE REMOVED FOR THE PROPOSED PROJECT THAT ARE NOT SHOWN HEREON. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF SUCH ITEMS AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL CONTACT RESPECTIVE UTILITY COMPANIES PRIOR TO DEMOLITION TO COORDINATE DISCONNECTION AND REMOVAL OF EXISTING UTILITIES WITHIN THE AREA OF WORK.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES THAT ARE INTENDED TO CONTINUE TO PROVIDE SERVICE WHETHER THESE UTILITIES ARE SHOWN ON THE PLAN OR NOT.
8. UPON DISCOVERY OF ANY UNDERGROUND TANKS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE. NO REMOVAL OF TANKS SHALL OCCUR UNTIL AUTHORIZED BY OWNER.
9. BUILDING AND APPURTENANCES DESIGNATED FOR DEMOLITION SHALL NOT BE DISTURBED BY THE CONTRACTOR UNTIL HE HAS FURNISHED WITH NOTICE TO PROCEED BY THE OWNER. AS SOON AS SUCH NOTICE HAS BEEN GIVEN, THE CONTRACTOR SHALL PERFORM THE DEMOLITION, UNDER THE DIRECTION OF THE OWNER'S REPRESENTATIVE.
10. ALL EXISTING UTILITIES WITHIN THE EXISTING BUILDING ARE TO BE REMOVED, WHERE CONFLICTS OCCUR WITH GRADE, BEAMS, PILES, PROPOSED UTILITIES AND TRENCH BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL REPORT.
11. FOUNDATIONS, FLOORS, FLOOR SLABS, AND ANY OTHER UNDERGROUND BUILDING STRUCTURES SHALL BE REMOVED IN ACCORDANCE WITH THE SPECIFICATIONS. AREAS OF STRUCTURE REMOVAL SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATIONS AND THE GEOTECHNICAL REPORT.
12. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL UNSUITABLE MATERIAL AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL CITY, STATE, AND FEDERAL LAWS AND ORDINANCES.
13. ALL MATERIAL, EXCEPT THAT BELONGING TO A PUBLIC UTILITY COMPANY OR DENOTED FOR SALVAGE, SHALL BECOME PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE OWNER OF WATER, ELECTRIC, OR GAS METERS WHEN THE METERS ARE READY FOR REMOVAL, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING ALL UTILITIES IN COMPLIANCE WITH LOCAL REQUIREMENTS. DISCONNECT TRANSFORMERS AS REQUIRED FOR BUILDING DEMOLITION.
14. AS SOON AS DEMOLITION WORK HAS BEEN COMPLETED, THE FINAL GRADE OF BACKFILL IN DEMOLITION AREAS SHALL BE COMPACTED PER THE GEOTECHNICAL REPORT TO PRESENT A NEAT, WELL DRAINED APPEARANCE, AND TO PREVENT WATER FROM DRAINING UNNECESSARILY ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL GRADE SITE TO EXISTING STORM DRAINAGE SYSTEM TO REMAIN ON SITE.
15. EXISTING TREES TO REMAIN SHOULD BE PROTECTED FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
16. THE CONTRACTOR IS TO COORDINATE WORK IN THIS PROJECT TO ENSURE ACCESS TO ADJACENT PROPERTIES AT ALL TIMES.

GENERAL PAVING NOTES:

1. CONTRACTOR MUST SECURE ALL NECESSARY PERMITS PRIOR TO STARTING WORK.
2. REFER TO GEOTECH REPORT FOR PREPARATION OF THE SUBGRADE.
3. IF THE CONTRACTOR, IN THE COURSE OF THE WORK, FINDS ANY DISCREPANCIES BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS OF THE LOCALITY, OR ANY ERRORS OR OMISSIONS IN THE PLANS OR IN THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO IMMEDIATELY INFORM THE ENGINEER, IN WRITING, AND THE ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH A DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTOR'S RISK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS, AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
5. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE STATE AND LOCAL GOVERNMENT AGENCY LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS.
6. ALL ACCESSIBLE SITE FEATURES SHALL BE CONSTRUCTED TO MEET ALL FEDERAL, STATE AND LOCAL CODE.
7. NOTIFY THE CITY INSPECTOR TWENTY–FOUR (24) HOURS BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
8. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS, AND STAKES.
9. ARCHITECTURAL PLANS ARE TO BE USED FOR BUILDING STAKE OUT.
10. ALL DIMENSIONS ARE FROM FACE OF BUILDING, CURB, AND WALL UNLESS OTHERWISE SPECIFIED ON PLANS.
11. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
12. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATION.
13. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
14. ALL ROAD WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE AND LOCAL GOVERNMENT AGENCY SPECIFICATIONS.

GENERAL GRADING/DRAINAGE NOTES:

1. ALL GRADING AND SITE PREPARATION SHALL CONFORM WITH SPECIFICATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
2. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE CITY LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS.
3. PRIOR TO ANY EXCAVATION OF THE PROJECT SITE, THE CONTRACTOR SHALL NOTIFY THE CITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS AND STAKES.
5. ALL INDICATED ELEVATIONS ARE FINISHED ELEVATIONS.
6. FIELD VERIFY LOCATIONS, SIZES AND IF APPLICABLE INVERTS OF EXISTING UTILITIES FOR PROPOSED CONNECTIONS PRIOR TO CONSTRUCTION.
7. LOCATE AND PROTECT ALL UTILITIES ASSOCIATED WITH THE PROJECT PRIOR TO CONSTRUCTION.
8. INSTALL SILT CONTROL MEASURES BEFORE BEGINNING SITE WORK. THESE MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
9. MAINTAIN PROPER SITE DRAINAGE AT ALL TIMES DURING CONSTRUCTION. PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.
10. INSTALL ALL APPROPRIATE TREE PROTECTION MEASURES PRIOR TO GRADING.
11. CUT AND FILL SLOPES SHALL HAVE A MAXIMUM SLOPE OF 4:1.
12. ALL EXCAVATION SHALL INCLUDE CLEARING, STRIPPING AND STOCKPILING TOPSOIL, REMOVING UNSUITABLE MATERIALS, THE CONSTRUCTION OF EMBANKMENTS, CONSTRUCTION FILLS, AND THE FINAL SHAPING AND TRIMMING TO THE THE LINES AND GRADES SHOWN ON THE PLANS.
13. ALL TREES, BRUSH, AND ORGANIC TOPSOIL AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED, UNLESS OTHERWISE SPECIFIED, AND DISPOSED OF AT AN OFF–SITE LOCATION, WITH THE EXCEPTION THAT ENOUGH TOPSOIL SHALL BE RETAINED FOR RESPREAD AND GENERAL LANDSCAPING. AREAS WHICH ARE TO BE FILLED SHALL BE COMPACTED TO A MAXIMUM DENSITY OF 95% AS DETERMINED BY THE MODIFIED AASHTO COMPACTION TEST IN THE PAVED AREAS AND 85% IN THE OTHER AREAS.
14. STRIP AND STOCKPILE TOPSOIL. SPREAD FOUR (4) INCHES MINIMUM OF TOPSOIL ON LANDSCAPE AREAS AND REMOVE EXCESS TOPSOIL FROM SITE. PREPARE SUB–GRADE FOR PAVEMENT AND CURBS AND BACKFILL CURBS AFTER CURB CONSTRUCTION.
15. PROVIDE SUPPLY OF TOPSOIL FOR LANDSCAPE CONTRACTOR FOR INSTALLATION IN ALL LANDSCAPE ISLANDS.
16. PROVIDE AND INSTALL TOPSOIL IN DISTURBED AREAS TO BE GRASSED, TO INCLUDE PAVEMENT SHOULDERS AND DETENTION AREAS.
17. ALL EARTHWORK AND BASE COURSE FOR THE PARKING AREA SHALL BE COMPACTED TO A MINIMUM OF 95% MODIFIED LABORATORY DENSITY. CERTIFICATION SAID COMPACTION SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER, OR HIS/HER REPRESENTATIVE, PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL. BOTH PROOF ROLLING AND COMPACTION TESTING MUST BE APPROVED AND WITNESSED BY THE ENGINEER OR OWNER REPRESENTATIVE.
18. THE PAVEMENT SUBGRADE AND BASE COURSE MATERIAL SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR OWNER REPRESENTATIVE PRIOR TO CONSTRUCTING THE BASE AND SURFACE COURSES THEREON.
19. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE TO ALL INLETS AND CATCH BASINS. AREAS OF SURFACE PONDING SHALL BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
20. IF AREAS ARE DISTURBED BEYOND PROPOSED GRADES BY NEGLIGENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY REGRADING OR REPAIR TO MATCH ORIGINAL EXISTING CONDITIONS.
21. SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. SHORING SHALL BE IN ACCORDANCE WITH ALL O.S.H.A AND LOCAL REGULATIONS.
22. STRUCTURES FOR STORM SEWERS SHALL BE IN ACCORDANCE WITH THESE IMPROVEMENT PLANS AND THE APPLICABLE STANDARD SPECIFICATIONS. WHERE GRANULAR TRENCH BACKFILL IS REQUIRED AROUND THESE STRUCTURES, THE COST SHALL BE CONSIDERED AS INCIDENTAL AND SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE STRUCTURE.
23. CONFIRM INVERTS OF ALL EXISTING STORM INLETS AND SANITARY SEWER MANHOLES BEFORE COMMENCING CONSTRUCTION.
24. ALL STORM SEWER LINES 18"–54" DIAMETER ARE TO BE REINFORCED CONCRETE PIPE ACCORDING TO ASTM C–76 TYPE III, UNLESS OTHERWISE SPECIFIED ON PLANS.
25. A GEOTEXTILE MATTING (LANDLOCK TRM 450 OR EQUIVALENT) SHALL BE USED FOR EROSION CONTROL AN ALL SLOPES GREATER THAN 3H:1V.
26. DRAINAGE STRUCTURES AND DETENTION POND SHALL BE MAINTAINED BY PROPERTY OWNERS.
27. CONTRACTOR SHALL ADHERE TO PROPOSED GRADES ALONG CREEKS, ESPECIALLY IN THE AREA OF THE PROPOSED DETENTION POND. IF AREAS ARE DISTURBED BEYOND PROPOSED GRADES BY NEGLIGENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY PENALTIES INCURRED.
28. ALL PROPOSED SPOT ELEVATIONS SHOWN INDICATE FINISHED GRADED ELEVATIONS AT EDGE OF PAVEMENT AND/OR GRADE BREAKS, UNLESS OTHERWISE NOTED.

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM–TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

GENERAL NOTES

C 050

J:\TAKE FIVE OIL\JM–TF021032 – SPANISH FORK, UT_CURRENT DRAWINGS\JM–TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 12:28 PM PHIL MINTON

CAUTION NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 7 DAYS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

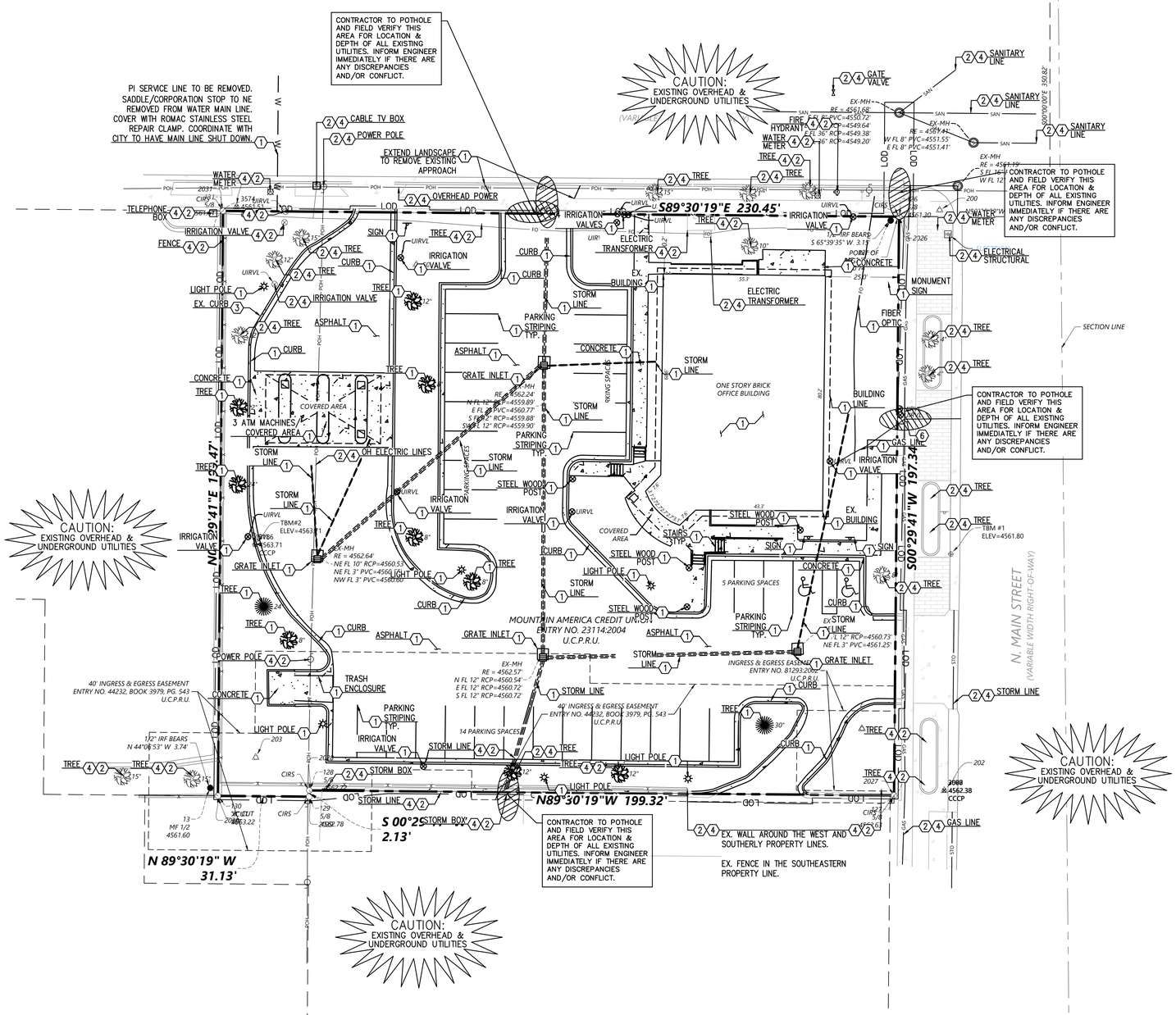
BENCHMARKS

TBM #1: AN "X" CUT ON TOP OF CONCRETE PAVING WITHIN N. MAIN STREET RIGHT-OF-WAY, LOCATED NEAR THE EAST PROPERTY LINE, APPROXIMATELY 2 FEET EAST AND 14 FEET SOUTH OF A SIGN POST. ELEVATION=4561.80 FEET.

TBM #2: AN "X" CUT ON TOP OF A CONCRETE BACK OF CURB LOCATED WITHIN THE SUBJECT PROPERTY NEAR THE WEST PROPERTY LINE AND LOCATED APPROXIMATELY 19 FEET WEST AND 39 FEET NORTH OF A POWER POLE. ELEVATION=4563.71 FEET.

FLOODNOTE

ACCORDING TO THE F.I.R.M. NO. 49049C0757F, THE SUBJECT PROPERTY LIES IN ZONE X AND DOES NOT LIE WITHIN A FLOOD PRONE HAZARD AREA, PER MAP REVISION DATED JUNE 19, 2020.



GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
- CONIFEROUS TREE
- FOUND MONUMENT / SET MONUMENT
- ELECTRIC BOX
- ELECTRIC METER
- POWER POLE WITH LIGHT
- GUY WIRE
- POWER POLE
- TELEPHONE BOX
- SIGN
- CABLE TV BOX
- LIGHT POLE
- STEEL/WOOD POST
- ELECTRIC BOX
- HANDICAPPED PARKING SPACE
- SECTION LINE
- BOUNDARY LINE
- OFF-SITE PROPERTY LINE
- EASEMENT LINE
- FIBER LINE
- POWER OVERHEAD
- CURB & GUTTER
- CONCRETE SURFACE
- ASPHALT SURFACE
- BRICK PAVERS
- WATERMAIN
- SANITARY SEWER
- UNDERGROUND GAS LINE
- POWER UNDERGROUND
- STORM SEWER

U.C.P.R.U.	UTAH COUNTY PUBLIC RECORDS, UTAH
TBM	TEMPORARY BENCHMARK
"X" CUT	"X" CUT IN CONCRETE
IRF	IRON ROD FOUND
CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

- PROPERTY LINE
- POTHOLE
- LIMITS OF FULL DEPTH SAWCUT
- LOD — APPROXIMATE LIMITS OF DISTURBANCE

DEMOLITION KEY NOTES:

1. EXISTING TO BE REMOVED.
2. EXISTING TO REMAIN.
3. ADJUST TO FINISHED GRADE.
4. EXISTING TO BE PROTECTED.
5. EXISTING TO BE RELOCATED.
6. POTHOLE PRIOR TO CONSTRUCTION TO IDENTIFY EXISTING UTILITIES

Know what's **below.** **Call** before you dig.

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER — No. 10527678-2202 — JOHN T. MEASELS — STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH

891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	POM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

DEMOLITION PLAN

C 060

J:\TAKE FIVE CIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/6/2022 11:42 AM PHIL MINTON

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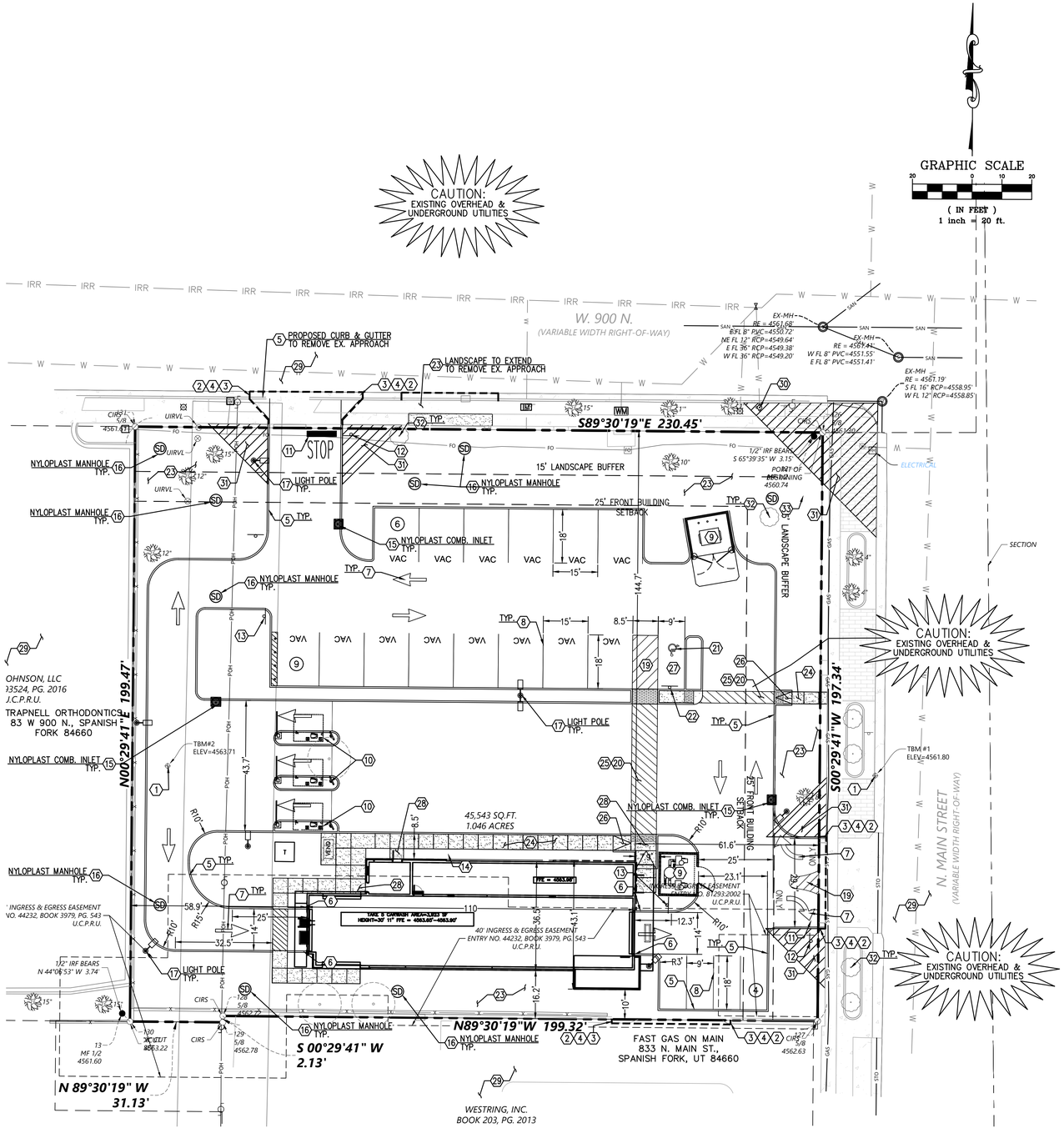
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STATEMENT:

ALL DRINKING WATER AND PRESSURIZED IRRIGATION LINES UP TO AND INCLUDING THE METER, ALL SANITARY SEWER MAINS, ALL ELECTRICAL METERS, AND ALL ELECTRIC AND SFCN COMMUNICATION SERVICE LINES UP TO THE MAST ON OVERHEAD INSTALLATIONS AND TO THE TOP OF THE METER BASE FOR UNDERGROUND INSTALLATIONS ARE DEDICATED TO SPANISH FORK CITY.



EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
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- TELEPHONE BOX
- SIGN
- CABLE TV BOX
- LIGHT POLE
- STEEL/WOOD POST
- ELECTRIC BOX
- HANDICAPPED PARKING SPACE
- SECTION LINE
- BOUNDARY LINE
- OFF-SITE PROPERTY LINE
- EASEMENT LINE
- FIBER LINE
- POWER OVERHEAD
- CURB & GUTTER
- CONCRETE SURFACE
- ASPHALT SURFACE
- BRICK PAVERS
- WATERMAIN
- SANITARY SEWER
- UNDERGROUND GAS LINE
- POWER UNDERGROUND
- STORM SEWER

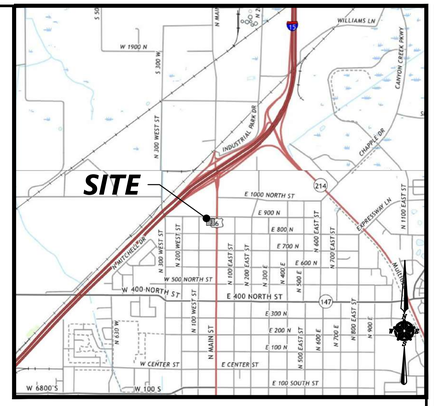
U.C.P.R.U.	UTAH COUNTY PUBLIC RECORDS, UTAH
TBM	TEMPORARY BENCHMARK
"X" CUT	"X" CUT IN CONCRETE
IRF	IRON ROD FOUND
CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

- PROPOSED CURB & GUTTER
- LIMITS OF FULL DEPTH SAWCUT
- FIRELANE
- STOP BAR STRIPING
- ACCESSIBLE SPACES
- ADA RAMP
- BOLLARD
- SIGN
- SAND/OIL INTERCEPTOR
- RECLAIM TANK
- CLEAN-OUT
- DOUBLE CLEAN-OUT
- SANITARY SEWER MANHOLE
- SAMPLE PORT
- PROPOSED TRANSFORMER PAD
- LIGHT POLE
- GAS METER
- WATER METER
- IRRIGATION METER
- NYLOPLAST COMBINATION INLET
- NYLOPLAST MANHOLE
- NYLOPLAST GRATE INLET

SITE KEY NOTES:

1. BENCHMARK.
2. LIMITS OF FULL DEPTH SAWCUT AND PAVEMENT REMOVAL..
3. MATCH EXISTING PAVEMENT ELEVATION.
4. MATCH EXISTING CURB.
5. CONCRETE CURB AND GUTTER. (PER LOCAL CODES)
6. TAPER CURB TO 0'
7. DIRECTIONAL TRAFFIC ARROW. (PER LOCAL CODES)
8. PARKING STALL STRIPING. (PER LOCAL CODES)
9. DUMPSTER/VACUUM ENCLOSURE. (PER ARCH. PLANS)
10. SELF SERVICE PAYMENT KIOSK (PER ARCH. PLANS).
11. STOP BAR. (PER LOCAL CODES)
12. STOP SIGN.
13. DO NOT ENTER SIGN.
14. ONE WAY SIGN (POINTING TO WEST).
15. NYLOPLAST COMBINATION INLET.
16. NYLOPLAST MANHOLE.
17. NYLOPLAST GRATE INLET.
17. LIGHT POLE. (PER ARCH. PLANS)
18. CURB CUT. (REFER TO NOTE FOR SIZE)
19. 4" WIDE PAINTED STRIPES, 2' OFF CENTER @ 45°.
20. PEDESTRIAN/ACCESSIBLE CROSSWALK STRIPING.
21. ACCESSIBLE STRIPING & SYMBOL. (TYPICAL-PER ADA AND LOCAL REQUIREMENTS)
22. ACCESSIBLE SIGNS. (TYPICAL-PER ADA AND LOCAL REQUIREMENTS)
23. LANDSCAPE AREA. (PER LANDSCAPE PLAN)
24. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ SIDEWALK.
25. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ CROSSWALK.
26. 2.00% MAX CROSS-SLOPE AND 8.33% MAX LONGITUDINAL SLOPE @ RAMPS.
27. 2.00% MAX IN ALL DIRECTIONS @ ADA PARKING STALL.
28. 2.00% MAX IN ALL DIRECTIONS @ LEVEL LANDINGS.
29. EXISTING PAVEMENT TO REMAIN.
30. EXISTING FIRE HYDRANT
31. VISION TRIANGLE (PER LOCAL REQUIREMENTS)
32. LOCATION OF EXISTING TREES. FIELD VERIFY.
33. LOCATION OF EXISTING SIGN. FIELD VERIFY.



LOCATION MAP

1" = 2000'

SITE DATA TABLE

LOCATION:	891 N. MAIN ST., SPANISH FORK, UT 84660	
LOT AREA:	1.07 AC. (46,610 S.F.)	
ZONING:	ZONING: C-2, GEN. COMM.	
CURRENT USE:	BANK	
PROPOSED USE:	CAR WASH	
BUILDING DATA:		
BUILDING AREA	3,897 S.F.	
BUILDING HEIGHT	27'-3" (1 STORY)	
BUILDING COVERAGE	11.96%	
F.A.R.	8.36:1	
PARKING SUMMARY: MIN. 1:200 S.F.	**REQUIRED**	**PROVIDED**
PARKING SPACES (9'x18')	19	5
ACCESSIBLE SPACES	1	1
TOTAL SPACES	19	6
VACUUMS	13-14	17
LANDSCAPE:		
PERVIOUS:	15,489.12 S.F.	
IMPERVIOUS:	31,120.88 S.F.	

DEVELOPMENT SITE PLAN

DEVELOPER:	DRIVEN BRANDS
	6300 SOUTH SYRACUSE WAY
	STE. 290 GREENWOOD
	VILLAGE, CO 80111
ENGINEER:	ANDRE SUTIONO,
	JM CIVIL ENGINEERING
	1101 CENTRAL EXPY S.,
	STE 215, ALLEN, TX 75013
	214-705-3182
	ASUTIONO@JMCIVILENG.COM
SURVEYOR:	SCOTT BERGHERR
	JM CIVIL ENGINEERING
	1101 CENTRAL EXPY S.,
	STE 215, ALLEN, TX 75013
	214-491-1830 EXT 217
	SBERGHERR@JMCIVILENG.COM
ARCHITECT:	ROGER KRAUSE
	PM DESIGN GROUP
	38 EXECUTIVE PARK
	STE 310 IRVINE, CA 92614
	949-562-1722
	RKRAUSE@PMDGINC.COM

Know what's **below.** **Call** before you dig.

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH

12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	POM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

SITE PLAN

C 100

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 12:58 PM PHIL MINTON

CAUTION NOTICE TO CONTRACTOR

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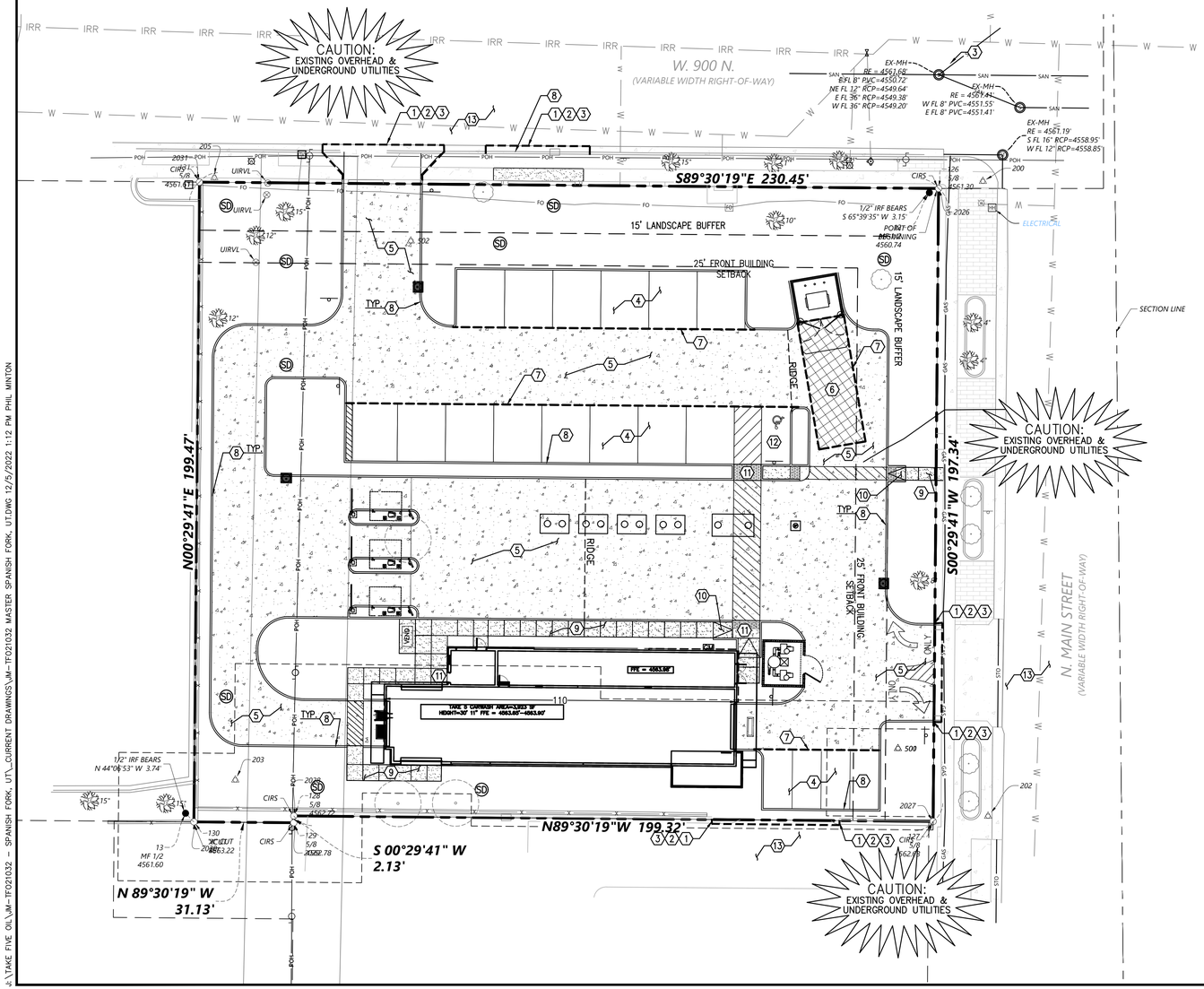
BENCHMARKS

TBM #1: AN "X" CUT ON TOP OF CONCRETE PAVING WITHIN N. MAIN STREET RIGHT-OF-WAY, LOCATED NEAR THE EAST PROPERTY LINE, APPROXIMATELY 2 FEET EAST AND 14 FEET SOUTH OF A SIGN POST. ELEVATION=4561.80 FEET.

TBM #2: AN "X" CUT ON TOP OF A CONCRETE BACK OF CURB LOCATED WITHIN THE SUBJECT PROPERTY NEAR THE WEST PROPERTY LINE AND LOCATED APPROXIMATELY 19 FEET WEST AND 39 FEET NORTH OF A POWER POLE. ELEVATION=4563.71 FEET.

FLOODNOTE

ACCORDING TO THE F.I.R.M. NO. 49049C0757F, THE SUBJECT PROPERTY LIES IN ZONE X AND DOES NOT LIE WITHIN A FLOOD PRONE HAZARD AREA, PER MAP REVISION DATED JUNE 19, 2020.



GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

PAVING KEY NOTES:

1. MATCH EXISTING PAVEMENT ELEVATION.
2. MATCH EXISTING CURB.
3. LIMITS OF FULL DEPTH SAWCUT AND PAVEMENT REMOVAL.
4. LIGHT DUTY CONCRETE PAVEMENT.
5. MEDIUM DUTY CONCRETE PAVEMENT.
6. HEAVY DUTY CONCRETE PAVEMENT
7. CONSTRUCTION JOINT.
8. PROPOSED CONCRETE CURB AND GUTTER. (PER LOCAL CODE)
9. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ SIDEWALK.
10. 2.00% MAX CROSS-SLOPE AND 8.33% MAX LONGITUDINAL SLOPE @ RAMPS.
11. 2.00% MAX IN ALL DIRECTIONS @ LEVEL LANDINGS.
12. 2.00% MAX IN ALL DIRECTIONS @ ADA PARKING STALL.
13. EXISTING PAVEMENT TO REMAIN.

PROPOSED PAVING LEGEND:

- CONCRETE SIDEWALK. 5' MINIMUM WIDTH WITH FIBER REINFORCEMENT, 5'x5' TOOOLED JOINTS, AN FULL CONSTRUCTION JOINTS EVERY 50'.
- 5" LIGHT DUTY CONCRETE PAVEMENT. AT A MINIMUM 4,000 PSI AT 28 DAYS. #3 BARS @ 18" ON CENTER EACH WAY. REFER TO GEOTECH REPORT, ECS PROJECT #17:5905, FOR SUBGRADE PREPARATION
- 6" MEDIUM DUTY CONCRETE PAVEMENT. AT A MINIMUM 4,000 PSI AT 28 DAYS. #3 BARS @ 18" ON CENTER EACH WAY. REFER TO GEOTECH REPORT, ECS PROJECT #17:5905, FOR SUBGRADE PREPARATION
- 7" HEAVY DUTY CONCRETE PAVEMENT. AT A MINIMUM 4,000 PSI AT 28 DAYS. #3 BARS @ 18" ON CENTER EACH WAY. REFER TO GEOTECH REPORT, ECS PROJECT #17:5905, FOR SUBGRADE PREPARATION
- CONSTRUCTION JOINT

PAVING NOTES:

1. PANELS WIDTH/LENGTH SHALL BE BETWEEN 12'–17'.
2. PANELS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.25:1
3. ALL JOINTS SHALL CONTINUE THROUGH THE CURBING
4. EXPANSION JOINTS SHALL BE PLACED NO MORE THAN 60' O.C.E.W.

811 Know what's **below.** **Call** before you dig.

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Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH

12/05/22

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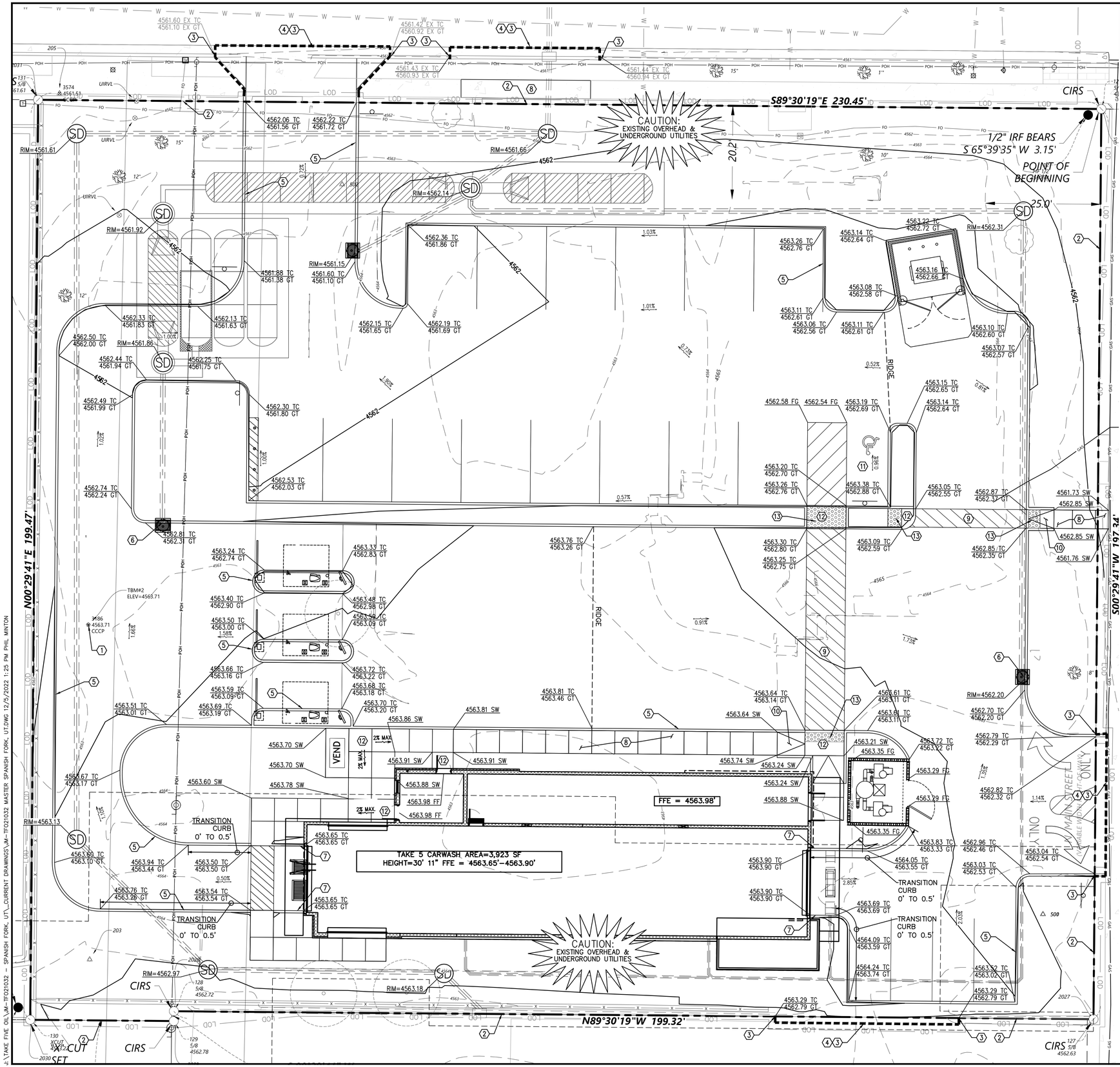
REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

PAVING PLAN

C 200

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:12 PM PHIL MINTON



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ENGINEER'S NOTE:

1. POT HOLE PRIOR TO CONSTRUCTION TO IDENTIFY LOCATION AND DEPTH OF ALL UTILITIES IN THIS AREA. NOTIFY ENGINEER IMMEDIATELY IF THERE ARE ANY CONFLICTS AND/OR DISCREPANCIES.
2. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF PROPOSED GRADES CANNOT BE MET.
3. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF THERE IS ANY DISCREPANCY FROM PROPOSED GRADES WHILE STAKING.

EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
- CONIFEROUS TREE
- FOUND MONUMENT
- SET MONUMENT
- ELECTRIC BOX
- ELECTRIC METER
- POWER POLE WITH LIGHT
- GUY WIRE
- POWER POLE
- TELEPHONE BOX
- SIGN
- CABLE TV BOX
- LIGHT POLE
- STEEL/WOOD POST
- ELECTRIC BOX
- HANDICAPPED PARKING SPACE
- SECTION LINE
- BOUNDARY LINE
- OFF-SITE PROPERTY LINE
- EASEMENT LINE
- FIBER LINE
- POWER OVERHEAD
- CURB & GUTTER
- CONCRETE SURFACE
- ASPHALT SURFACE
- BRICK PAVERS
- WATERMAIN
- SANITARY SEWER
- UNDERGROUND GAS LINE
- POWER UNDERGROUND
- STORM SEWER
- XXXX EX EXISTING SPOT ELEVATION

U.C.P.R.U. UTAH COUNTY PUBLIC RECORDS, UTAH
TBM TEMPORARY BENCHMARK
"X" CUT "X" CUT IN CONCRETE
IRF IRON ROD FOUND
CIRS 5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

- PROPOSED CURB & GUTTER
- LIMITS OF FULL DEPTH SAWCUT
- FIRELANE
- STOP BAR STRIPING
- ACCESSIBLE SPACES
- ADA RAMP
- BOLLARD
- SIGN
- SAND/OIL INTERCEPTOR
- RECLAIM TANK
- CLEAN-OUT
- DOUBLE CLEAN-OUT
- SANITARY SEWER MANHOLE
- SAMPLE PORT
- NYLOPLAST COMBINATION INLET
- NYLOPLAST MANHOLE
- NYLOPLAST GRATE INLET
- LIGHT POLE
- GAS METER
- WATER METER
- IRRIGATION METER
- XXXX TP TOP OF PAVEMENT ELEVATION
- XXXX TC TOP OF CURB
- XXXX GT GUTTER
- XXXX GR GROUND
- XXXX FF FINISH FLOOR
- XXXX SW SIDEWALK
- XXXX TG TOP OF GRATE

GRADING KEY NOTES:

1. BENCHMARK.
2. MATCH EXISTING GROUND ELEVATION.
3. MATCH EXISTING PAVEMENT ELEVATION.
4. LIMITS OF DISTURBANCE
5. PROPOSED CURB. (PER LOCAL CODE)
6. LOW POINT FOR COMBINATION INLET
7. TAPER CURB.
8. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ SIDEWALK AND ADA PATH OF TRAVEL
9. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ CROSSWALK.
10. 2.00% MAX CROSS-SLOPE AND 8.33% MAX LONGITUDINAL SLOPE @ RAMPS.
11. 2.00% MAX IN ALL DIRECTIONS @ ADA PARKING STALLS
12. 2.00% MAX IN ALL DIRECTIONS @ LEVEL LANDINGS, OPEN SPACES, AND TURNS
13. PROPOSED ADA COMPLIANT TRUNCATED DOMES.
14. EXISTING STRUCTURE, EXISTING GRADE TO REMAIN.
15. EXISTING STRUCTURE TO REMAIN AND PROTECT.

GRAPHIC SCALE
10 0 5 10
(IN FEET)
1 inch = 10 ft.

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9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

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SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
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	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

GRADING PLAN

C 300

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:25 PM PHIL MINTON

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ENGINEER'S NOTE:

1. REFER TO LANDSCAPE PLANS FOR MULCHING, SEEDING, AND SOIL STABILIZATION.
2. REFER TO SHEETS C410 FOR SOIL EROSION CONTROL DETAILS AND NOTES.
3. REFER TO SHEET C470 FOR CONCRETE WASHOUT DETAIL.

SEQUENCE OF CONSTRUCTION ACTIVITIES:

A. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCE AND SILT FENCE ACCORDING TO THE APPROXIMATE LOCATION SHOWN ON THE EROSION CONTROL PLAN.

B. CONSTRUCT TEMPORARY INLET TREATMENT AROUND OPEN STORM DRAIN INLETS ACCORDING TO THE EROSION CONTROL PLAN.

C. KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE.

D. BEGIN CLEARING AND GRADING OF SITE.

E. INSTALL WATER, SANITARY SEWER AND STORM DRAIN AS SPECIFIED ON PLAN SHEETS.

F. PAVE STREETS AND SIDEWALKS AS SPECIFIED ON PLAN SHEETS.

G. RE-VEGETATE LOTS, PARKWAYS AND ALL DISTURBED AREAS.

H. REMOVE ALL TEMPORARY EROSION CONTROL DEVICES.

MAINTENANCE:

A. CONTRACTOR TO KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE DURING CONSTRUCTION.

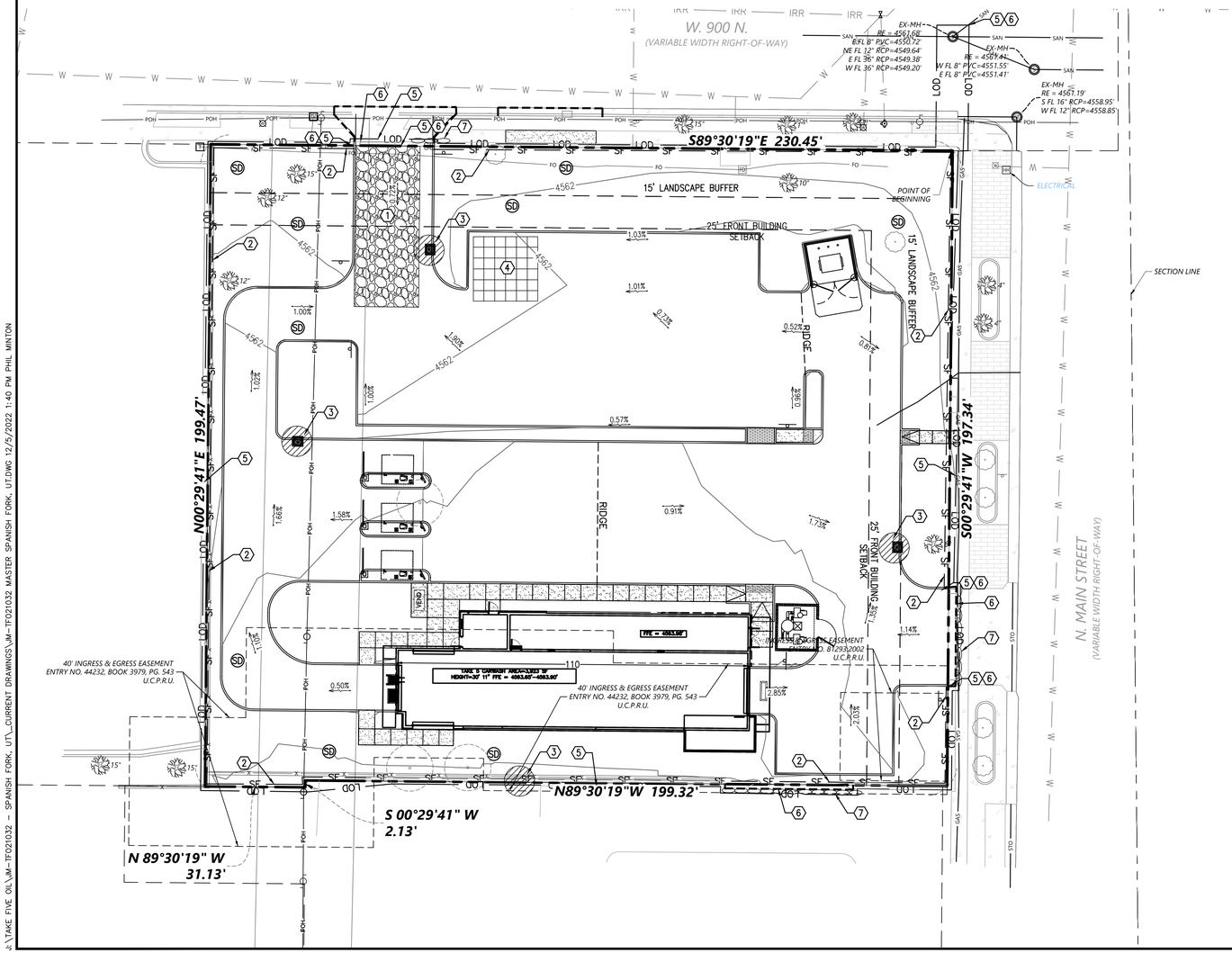
B. CONTRACTOR SHALL MAINTAIN ALONG WITH THE SIGNED EFFECTIVE COPY OF SWP3 DRAWINGS AN UPDATED LIST IDENTIFYING ALL POTENTIAL SOURCES OF POLLUTION INCLUDING PORTA-POTTYS. FUEL TANKS, STAGING AREAS, WASTE CONTAINERS, CHEMICAL STORAGE AREAS, CONCRETE CURE, PAINTS SOLVENTS, ETC., AND A DESCRIPTION OF THE LOCATION.

C. CONTRACTOR TO REMOVE ALL STORM WATER POLLUTION PREVENTION MEASURES AFTER CONSTRUCTION IS COMPLETE AND INSPECTED FOR APPROVAL. LONG TERM MAINTENANCE TO BE PROVIDED BY OWNER.

NOTES:

1. CONTRACTOR SHALL POLICE SITE REGULARLY AND AND KEEP SITE FREE OF TRASH AND CONSTRUCTION DEBRIS.
2. ALL EROSION CONTROL DEVICES SHALL BE CONSTRUCTED AND MAINTAINED IN COMPLIANCE WITH CITY STANDARD EROSION CONTROL DETAILS
3. TOTAL DISTURBED AREA=1.07 ACRES.
4. REFER TO LANDSCAPE PLAN FOR FINAL GROUND STABILIZATION

EROSION AND SEDIMENT CONTROL CONSTRUCTION PHASING:	DURATION OF PHASE	APPROX. DATE FOR START OF EACH PHASE
1. TOP SOIL REMOVAL, CLEARING, GRUBBING AND PAVING REMOVAL	15 DAYS	TBD
2. GRADING.	30 DAYS	TBD
3. UTILITY INSTALLATION.	30 DAYS	TBD
4. PAVING.	30 DAYS	TBD
5. BUILDING CONSTRUCTION.	60 DAYS	TBD
6. FINE GRADING.	15 DAYS	TBD
7. LANDSCAPE AND VEGETATION.	15 DAYS	TBD
8. BMP REMOVAL.	5 DAYS	TBD



GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

EXISTING LEGEND:

SANITARY MANHOLE	ELECTRIC BOX	SECTION LINE
SEWER CLEANOUT	ELECTRIC METER	BOUNDARY LINE
STORM MANHOLE	POWER POLE WITH LIGHT	OFF-SITE PROPERTY LINE
HYDRANT	GUY WIRE	EASEMENT LINE
GATE VALVE	POWER POLE	FIBER LINE
WATER METER	TELEPHONE BOX	POWER OVERHEAD
WATER MANHOLE	SIGN	CURB & GUTTER
DECIDUOUS TREE	CABLE TV BOX	CONCRETE SURFACE
CATCH BASIN	LIGHT POLE	ASPHALT SURFACE
IRRIGATION VALVE	STEEL/WOOD POST	BRICK PAVERS
CONIFEROUS TREE	ELECTRIC BOX	WATERMAIN
FOUND MONUMENT	HANDICAPPED PARKING SPACE	SANITARY SEWER
SET MONUMENT		UNDERGROUND GAS LINE
		POWER UNDERGROUND
		STORM SEWER

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TBM	TEMPORARY BENCHMARK
"X" CUT	"X" CUT IN CONCRETE
IRF	IRON ROD FOUND
CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

	PROPERTY LINE
	PROPOSED CURB & GUTTER
	LIMITS OF FULL DEPTH SAWCUT
XXX	PROPOSED CONTOUR
SF	PROPOSED SILT FENCE
LOD	APPROXIMATE LIMITS OF DISTURBANCE
	SAND BAG FILTER
	10' X 10' CONCRETE WASH AREA
	TEMPORARY INLET PROTECTION
	TEMPORARY CONSTRUCTION ENTRANCE
STOP	STOP BAR STRIPING
	ACCESSIBLE SPACES
	ADA RAMP
	BOLLARD
	SIGN
GM	GAS METER
WM	WATER METER
IM	IRRIGATION METER
	SAND/OIL INTERCEPTOR
	RECLAIM TANK
	CLEAN-OUT
	DOUBLE CLEAN-OUT
SS	SANITARY SEWER MANHOLE
SP	SAMPLE PORT
	NYLOPLAST COMBINATION INLET
SD	NYLOPLAST MANHOLE
	NYLOPLAST GRATE INLET

EROSION CONTROL KEY NOTES:

1. TEMPORARY CONSTRUCTION ENTRANCE.
2. TEMPORARY SILT FENCE.
3. TEMPORARY INLET PROTECTION.
4. 10'x10' CONCRETE WASH AREA.
5. LIMIT OF DISTURBANCE
6. LIMIT OF FULL DEPTH SAWCUT LINE
7. SAND BAG FILTER

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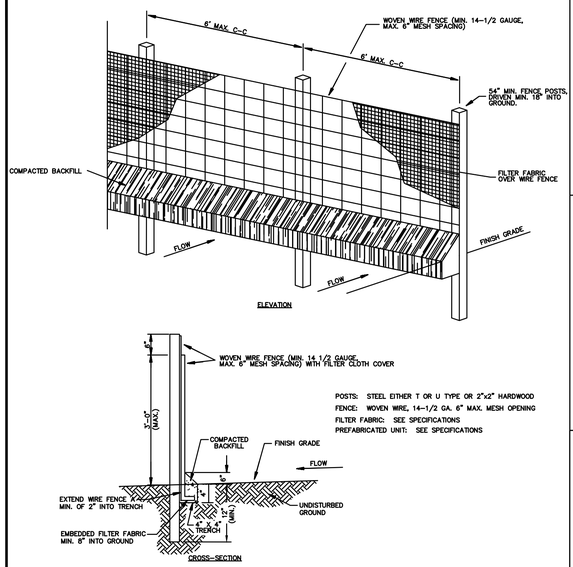
REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	POM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

SOIL AND EROSION CONTROL PLAN

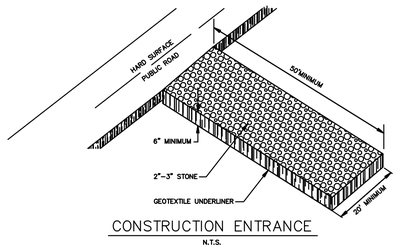
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J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:40 PM PHIL MINTON

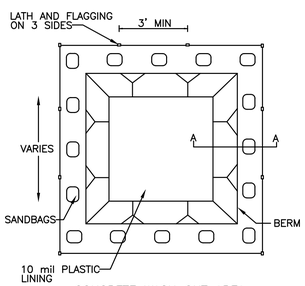


1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE
N.T.S.

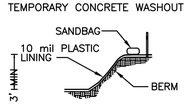


CONSTRUCTION ENTRANCE
N.T.S.

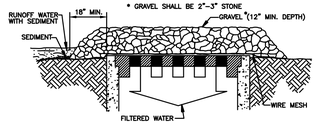


CONCRETE WASH OUT AREA
NTS

NOTES:
1. ACTUAL SIZE DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

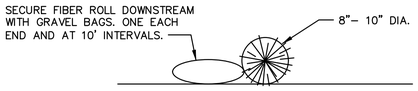


SECTION A-A
NTS



SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED ACRES.

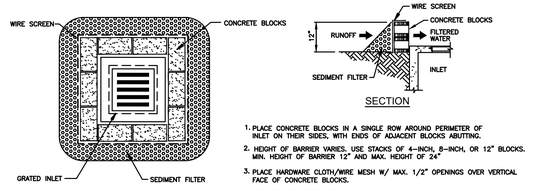
GRAVEL AND WIRE MESH INLET SEDIMENT FILTER
IP3
N.T.S.



NOTES:

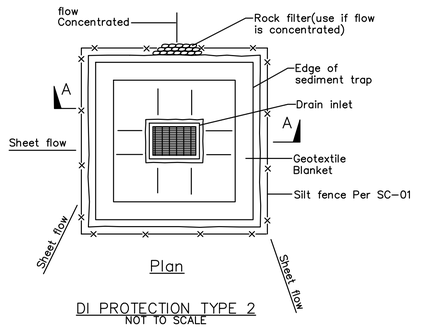
1. STRAW FIBER ROLL SHALL BE PLACED IN A POSITION WHERE RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

FIBER ROLLS (WATTLES)
N.T.S.

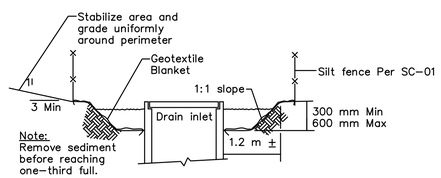


1. PLACE CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF INLET ON THEIR SIDES, WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES. USE STACKS OF 4-INCH, 8-INCH, OR 12" BLOCKS. MIN. HEIGHT OF BARRIER 12" AND MAX. HEIGHT OF 24"
3. PLACE HARDWARE CLOTH/WIRE MESH W/ MAX. 1/2" OPENINGS OVER VERTICAL FACE OF CONCRETE BLOCKS.
4. THE SEDIMENT FILTER SHALL BE ANY NON-ERODIBLE MATERIAL SUCH AS LOOSE ROCK, BROKEN CONCRETE THAT WILL SLOW THE FLOW OF THE WATER AND ALLOW IT TO FILTER THROUGH AND OVER THE MATERIAL BEFORE ENTERING THE INLET.

BLOCK AND AGGREGATE INLET SEDIMENT FILTER
IP1
N.T.S.



DI PROTECTION TYPE 2
NOT TO SCALE



Section A-A

Notes
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction flow.

CATCH BASIN INLET PROTECTION DETAIL
N.T.S.

BEST MANAGEMENT PRACTICES

1. STRUCTURAL MEASURES SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT IN EFFECTIVE OPERATING CONDITION.

2. DOCUMENTATION OF MAINTENANCE ACTIVITIES INCLUDING FREQUENCY, LOT DESIGNATION, INSPECTION OF STRUCTURAL CONTROLS, MATERIAL STORAGE AREAS, VEHICLE ENTRANCES AND EXITS: ACTIONS TAKEN AND INSPECTORS NAME.
3. CONSTRUCTION SITE NOTICE WILL BE MAINTAINED ON SITE
4. COPY OF SWPPP SHALL BE KEPT ON SITE
5. PERIMETER MUST RETAIN THE SWPPP, NOI AND INSPECTION LOG FOR A MINIMUM OF 3 YEARS FROM THE TERMINATION AND FINAL STABILIZATION OF PROJECT

I. WASTE MATERIALS
ALL WASTE MATERIALS INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURED LIDDED METAL DUMPSTER. NO CONSTRUCTION MATERIALS SHALL BE BURIED ON SITE. THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH BE HAULED TO A LICENSED LANDFILL.

II. HAZARDOUS WASTE
AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES SHALL BE CONSIDERED HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS. ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATION, CURING, COMPOUNDS AND ADDITIVES. IN EVENT OF SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPARTMENT AND NMED.

III. SANITARY WASTE
ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV. SPILL PREVENTION
THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURES OF MATERIALS TO STORM WATER RUNOFF.

V. GOOD HOUSEKEEPING
A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB
B. NEATLY STORE MATERIALS ON-SITE IN A SECURE MANNER
C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER
D. DO NOT MIX SUBSTANCES WITH ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER.
E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING OF THE CONTAINER
F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROP USE AND DISPOSAL

VI. HAZARDOUS CONDITIONS
PRACTICES TO REDUCE RISKS:
A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURERS

VII. PETROLEUM PRODUCTS
PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED, ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER RECOMMENDATION.

VIII. SPILL CONTROL PRACTICES:
A. MANUFACTURERS RECOMMENDED METHODS FOR SPILL CLEAN UP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE WARE OF THE PROCEDURE
B. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE
C. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY
D. SPILL AREA SHALL BE WELL VENTILATED AND APPROPRIATE CLOTHING WILL BE WORN
E. ANY SPILL SHALL BE REPORTED TO THE APPROPRIATE GOVERNMENTAL AGENCY
F. MEASURES SHALL BE TAKEN TO PREVENT A SPILL FROM REOCCURRING

IX. MAINTENANCE AND INSPECTION PROCEDURES
ALL POLLUTION PREVENTION MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY 14 DAYS AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR MORE BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY. A RECORD OF THE RESULTS OF THE INSPECTIONS OF THE SITE SHALL BE KEPT ON-SITE

X. REMARKS
DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS, CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
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REV	DATE	DESCRIPTION	NAME
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	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM-TFO21032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

SOIL AND EROSION CONTROL DETAILS

C 410

J:\TAKE FIVE OIL\JM-TFO21032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TFO21032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:25 PM PHIL MINTON

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BENCHMARKS

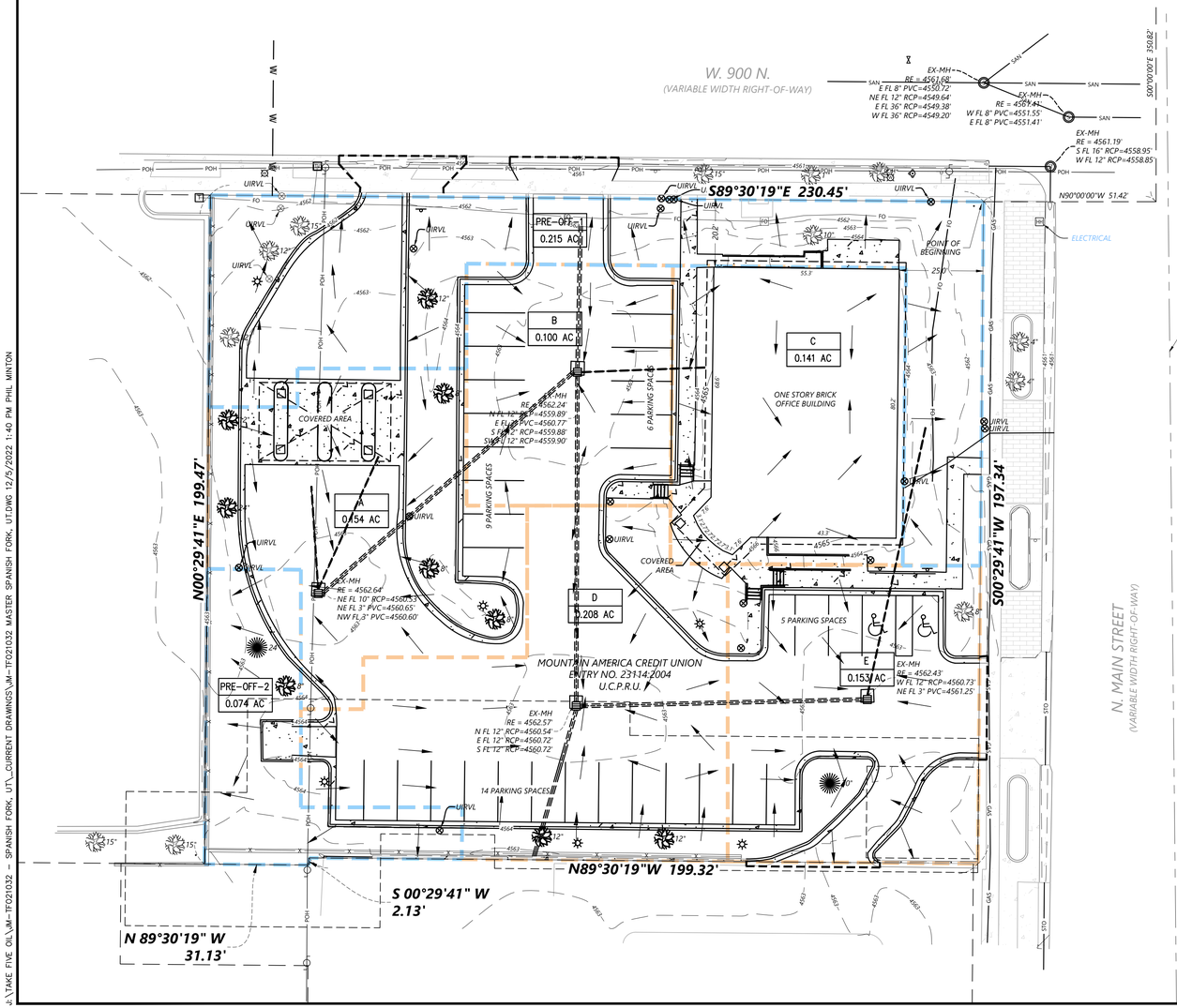
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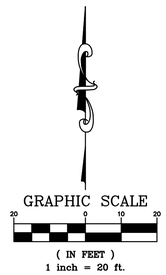
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FLOODNOTE

ACCORDING TO THE F.I.R.M. NO. 49049C0757F, THE SUBJECT PROPERTY LIES IN ZONE X AND DOES NOT LIE WITHIN A FLOOD PRONE HAZARD AREA, PER MAP REVISION DATED JUNE 19, 2020.

DESIGN AREA	PERVIOUS AREA	IMPERVIOUS AREA	TOTAL AREA	RUNOFF COEFFICIENT PERVIOUS (10-YR)	RUNOFF COEFFICIENT IMPERVIOUS (10-YR)	COMPOSITE RUNOFF COEFFICIENT (10-YR)	PERCENT IMPERVIOUS	10 YEAR RAINFALL INTENSITY	25 YEAR RAINFALL INTENSITY	100 YEAR RAINFALL INTENSITY	10 YEAR RUNOFF	25 YEAR RUNOFF	100 YEAR RUNOFF
	AC	AC	AC	-	-	-	%	IN/HR	IN/HR	IN/HR	CFS	CFS	CFS
PRE-A	0.04	0.11	0.15	0.35	0.95	0.79	73.40	3.19	4.20	6.17	0.38	0.50	0.74
PRE-B	0.01	0.10	0.11	0.35	0.95	0.88	87.59	3.19	4.20	6.17	0.31	0.40	0.59
PRE-C	0.00	0.14	0.14	0.35	0.95	0.96	101.04	3.19	4.20	6.17	0.43	0.56	0.83
PRE-D	0.05	0.17	0.22	0.35	0.95	0.82	78.20	3.19	4.20	6.17	0.56	0.74	1.09
PRE-E	0.03	0.12	0.15	0.35	0.95	0.83	80.39	3.19	4.20	6.17	0.40	0.52	0.77
PRE-OFF-1	0.14	0.07	0.21	0.35	0.95	0.56	35.24	3.19	4.20	6.17	0.38	0.50	0.73
PRE-OFF-2	0.05	0.02	0.07	0.35	0.95	0.49	23.61	3.19	4.20	6.17	0.11	0.14	0.21
Total:	0.32	0.73	1.05							Total:	2.56	3.37	4.95





EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
- CONIFEROUS TREE
- FOUND MONUMENT
- SET MONUMENT
- ELECTRIC BOX
- ELECTRIC METER
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U.C.P.R.U.	UTAH COUNTY PUBLIC RECORDS, UTAH
TBM	TEMPORARY BENCHMARK
"X" CUT	"X" CUT IN CONCRETE
IRF	IRON ROD FOUND
CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

DRAINAGE DIRECTION

PRE DEVELOPMENT DRAINAGE AREA KEY:

PRE DEVELOPMENT ON-SITE DRAINAGE AREA

PRE DEVELOPMENT OFF-SITE DRAINAGE AREA

X — Area
X.XX AC — Acreage

NOTE:

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PRE DEV DRAINAGE AREA MAP

C 500

J:\TAKE FIVE OIL\JM-TFO21032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TFO21032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:40 PM PHIL MINTON

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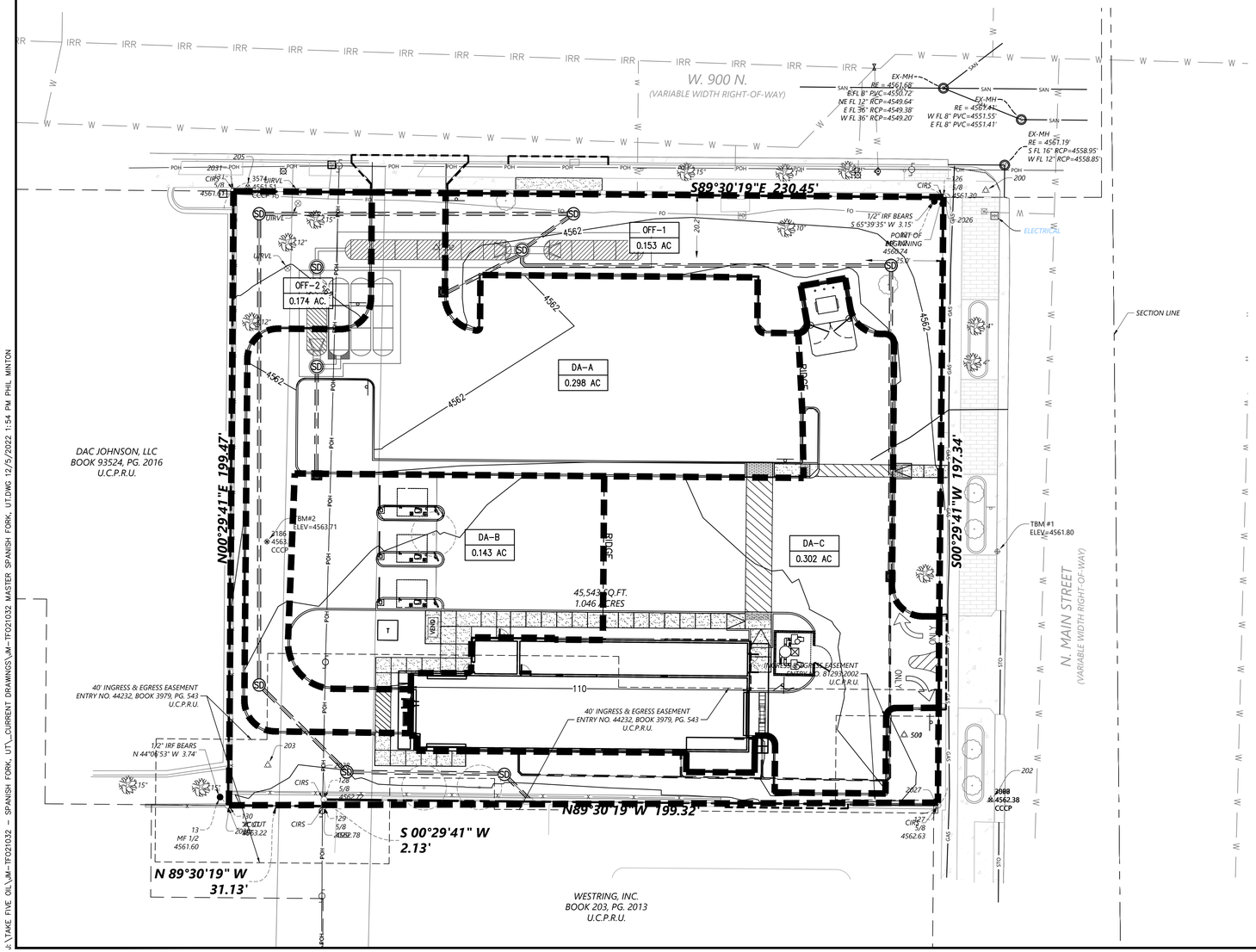
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DA-B	0.02	0.12	0.13	0.13	0.95	0.86	88.72	3.19	4.20	6.17	0.36	0.48	0.70
DA-C	0.01	0.28	0.29	0.18	0.95	0.92	96.67	3.19	4.20	6.17	0.86	1.13	1.66
OFF-1	0.15	0.00	0.15	0.20	0.95	0.21	1.30	3.19	4.20	6.17	0.10	0.14	0.20
OFF-2	0.17	0.00	0.17	0.22	0.95	0.24	2.30	3.19	4.20	6.17	0.13	0.17	0.25
Total:	0.37	0.68	1.05							Total:	2.29	3.02	4.44



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1 inch = 20 ft.

EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
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CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

- PROPOSED CURB & GUTTER
- LIMITS OF FULL DEPTH SAWCUT
- PROPOSED STORM DRAIN LINE
- STOP BAR STRIPING
- ACCESSIBLE SPACES
- ADA RAMP
- SIGN
- NYLOPLAST COMBINATION INLET
- NYLOPLAST MANHOLE
- NYLOPLAST GRATE INLET
- SAND/OIL INTERCEPTOR
- RECLAIM TANK
- CLEAN-OUT
- DOUBLE CLEAN-OUT
- GAS METER
- WATER METER
- IRRIGATION METER
- SANITARY SEWER MANHOLE
- SAMPLE PORT
- DRAINAGE DIRECTION
- DRAINAGE SLOPE AND DIRECTION

POST DEVELOPMENT DRAINAGE AREA KEY:

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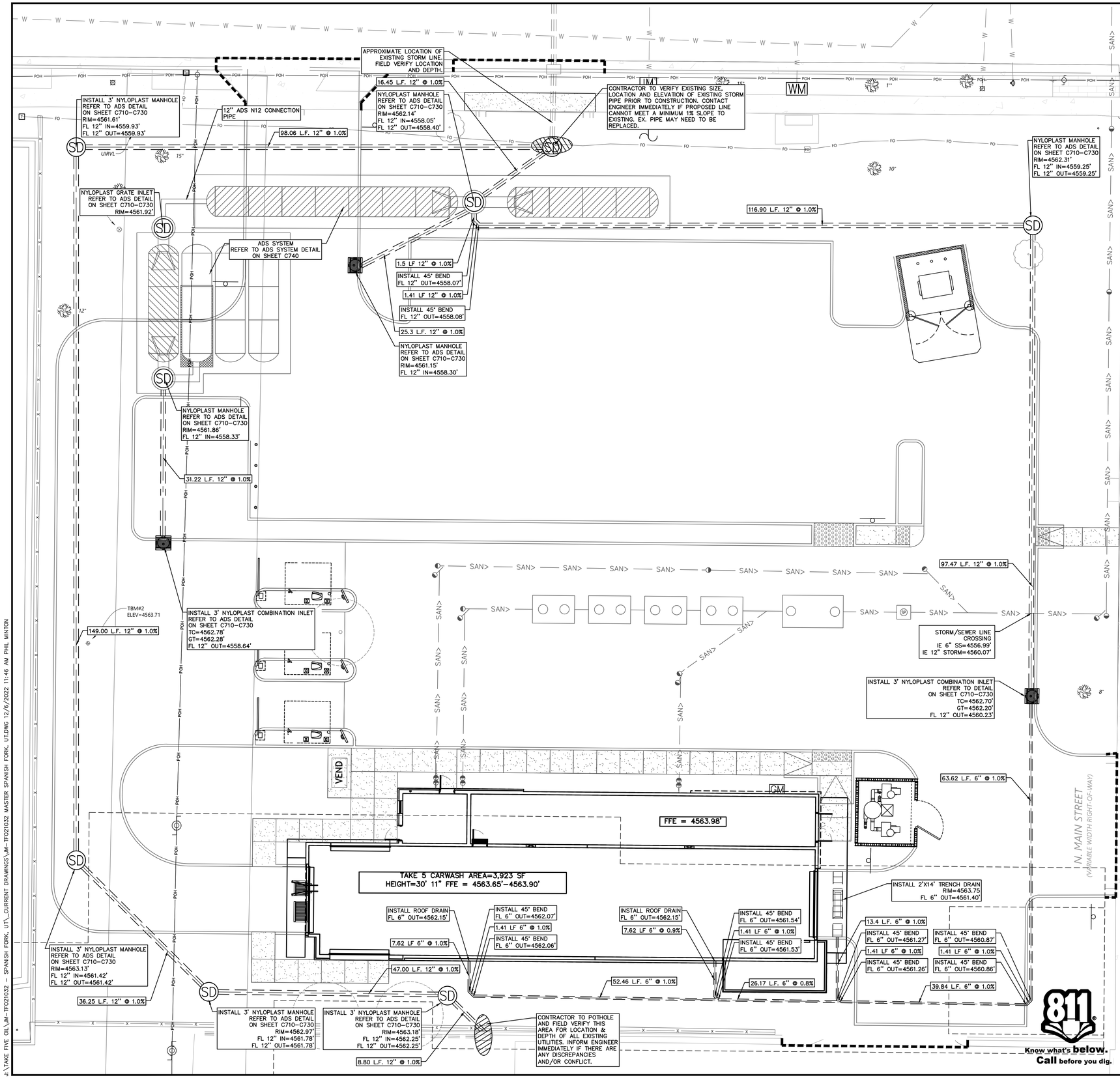
REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM-TFO21032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

POST DEV DRAINAGE AREA MAP

C 510

J:\TAKE FIVE OIL\JM-TFO21032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TFO21032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:54 PM PHIL MINTON



CAUTION NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 7 DAYS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

BENCHMARKS

TBM #1: AN "X" CUT ON TOP OF CONCRETE PAVING WITHIN N. MAIN STREET RIGHT-OF-WAY, LOCATED NEAR THE EAST PROPERTY LINE, APPROXIMATELY 2 FEET EAST AND 14 FEET SOUTH OF A SIGN POST. ELEVATION=4561.80 FEET.

TBM #2: AN "X" CUT ON TOP OF A CONCRETE BACK OF CURB LOCATED WITHIN THE SUBJECT PROPERTY NEAR THE WEST PROPERTY LINE AND LOCATED APPROXIMATELY 19 FEET WEST AND 39 FEET NORTH OF A POWER POLE. ELEVATION=4563.71 FEET.

FLOODNOTE

ACCORDING TO THE F.I.R.M. NO. 49049C0757F, THE SUBJECT PROPERTY LIES IN ZONE X AND DOES NOT LIE WITHIN A FLOOD PRONE HAZARD AREA, PER MAP REVISION DATED JUNE 19, 2020.

PIPING MATERIAL SCHEDULE

STORM SEWER SMALLER THAN 12"	SDR-35 PVC PER ATSM D3034
STORM SEWER - 12" OR LARGER (PRIVATE)	DUAL WALLED HDPE, AASHTO M252 &M294
STORM SEWER - WITHIN PUBLIC EASEMENT OR RIGHT-OF-WAY.	RCP, C-76, CLASS III

ENGINEER'S NOTE:

1. POT HOLE PRIOR TO CONSTRUCTION TO IDENTIFY LOCATION AND DEPTH OF ALL UTILITIES IN THIS AREA. NOTIFY ENGINEER IMMEDIATELY IF THERE ARE ANY CONFLICTS AND/OR DISCREPANCIES.
2. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF PROPOSED STORM DRAIN INVERTS CANNOT BE MET WHILE TRENCHING.
3. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF THERE IS ANY DISCREPANCY FROM PROPOSED STORM DRAIN INVERTS AND CROSSINGS WHILE TRENCHING.
4. ALL PROPOSED UTILITIES WITHIN THE PROPERTY LINE OF THE SITE ARE TO BE CONSIDERED PROPOSED AND PRIVATE.

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 10 ft.

EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
- CONIFEROUS TREE
- FOUND MONUMENT
- SET MONUMENT
- ELECTRIC BOX
- ELECTRIC METER
- POWER POLE WITH LIGHT
- GUY WIRE
- POWER POLE
- TELEPHONE BOX
- SIGN
- CABLE TV BOX
- LIGHT POLE
- STEEL/WOOD POST
- ELECTRIC BOX
- HANDICAPPED PARKING SPACE
- SECTION LINE
- BOUNDARY LINE
- OFF-SITE PROPERTY LINE
- EASEMENT LINE
- FIBER LINE
- POWER OVERHEAD
- CURB & GUTTER
- CONCRETE SURFACE
- ASPHALT SURFACE
- BRICK PAVERS
- WATERMAIN
- SANITARY SEWER
- UNDERGROUND GAS LINE
- POWER UNDERGROUND
- STORM SEWER

U.C.P.R.U.	UTAH COUNTY PUBLIC RECORDS, UTAH
TBM	TEMPORARY BENCHMARK
"X" CUT	"X" CUT IN CONCRETE
IRF	IRON ROD FOUND
CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

- PROPOSED CURB & GUTTER
- LIMITS OF FULL DEPTH SAWCUT
- PROPOSED STORM DRAIN LINE
- SAN> PROPOSED SANITARY SEWER LINE
- E PROPOSED ELECTRIC LINE
- GAS PROPOSED GAS LINE
- T PROPOSED TELEPHONE LINE
- W DOMESTIC WATER LINE
- STOP BAR STRIPING
- ACCESSIBLE SPACES
- ADA RAMP
- SIGN
- SAND/OIL INTERCEPTOR
- RECLAIM TANK
- CLEAN-OUT
- DOUBLE CLEAN-OUT
- GM GAS METER
- WM WATER METER
- IM IRRIGATION METER
- NYLOPLAST COMBINATION INLET
- SD NYLOPLAST MANHOLE
- NYLOPLAST GRATE INLET
- LIGHT POLE
- SS SANITARY SEWER MANHOLE
- SAMPLE PORT
- POTHOLE

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

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	07/21/22	INITIAL SUBMITTAL	JV
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ISSUE DATE: 12/05/22

STORM DRAIN PLAN

C 520

J:\TAKE FIVE OIL\JM-TFO21032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TFO21032 MASTER SPANISH FORK, UT.DWG 12/6/2022 11:46 AM PHIL MINTON

SITE DEVELOPMENT PLANS FOR

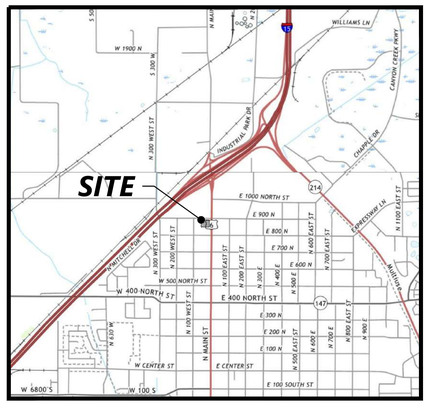
TAKE FIVE EXPRESS CAR WASH

891 N. MAIN ST.,
SPANISH FORK, UT 84660

ZONING - C2

SHEET INDEX

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	PLAT / SURVEY
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C 060	DEMOLITION PLAN
C 100	SITE PLAN
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C 300	GRADING PLAN
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C 410	SOIL EROSION AND SEDIMENT CONTROL DETAILS
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C 750	ADS SYSTEM DETAILS
C 760	CITY DETAILS
L 100	PLANTING PLAN
L 200	LANDSCAPE NOTES AND PLANTING CALCULATIONS



LOCATION MAP
1" = 2000'

OWNER/DEVELOPER:

DRIVEN BRANDS, INC.

CONTACT: MATTHEW A. GILBERT
4410 SOUTH CHURCH STREET, SUITE 700
CHARLOTTE, NC 28202
(980) 259-0701

ENGINEER:

JM CIVIL ENGINEERING

CONTACT: JOHN MEASELS, PE (ENGINEER)
1101 CENTRAL EXPRESSWAY SOUTH, SUITE 215
ALLEN, TX 75013
JMEASELS@JMCIVILENG.COM
(214) 491-1830

SURVEYOR:

JM CIVIL ENGINEERING

CONTACT: SCOTT BERGHERR, RPLS, PLS
1101 CENTRAL EXPRESSWAY SOUTH, SUITE 215
ALLEN, TX 75013
SBERGHERR@JMCIVILENG.COM
(214) 491-1830

UTILITY CONTACTS

ENGINEER
CITY OF SPANISH FORK
JERED JOHNSON
40 S. MAIN ST., STE. 240
SPANISH FORK, UT 84660
TEL: (801) 804-4575

ELECTRIC
CITY OF SPANISH FORK
TOM COOPER
40 S. MAIN ST., OFFICE 210
SPANISH FORK, UT 84660
TEL: (801) 804-4430

GAS
DOMINION ENERGY
JADEN GEETING
1640 N. MOUNTAIN SPRINGS PKWY.,
SPRINGVILLE, UT 84663
TEL: (385) 290-7428

WASTEWATER
CITY OF SPANISH FORK
CORY PIERCE
40 S. MAIN ST., OFFICE 210
SPANISH FORK, UT 84660
TEL: (801) 804-4466

STORMWATER
CITY OF SPANISH FORK
MICHAEL CLARK
40 S. MAIN ST., OFFICE 210
SPANISH FORK, UT 84660
TEL: (801) 804-4552

WATER
CITY OF SPANISH FORK
PAUL TAYLOR
40 S. MAIN ST., OFFICE 210
SPANISH FORK, UT 84660
TEL: (801) 804-4458

TELEPHONE/INTERNET
CITY OF SPANISH FORK
BRIAN PERRY
65 SOUTH 630 W.
SPANISH FORK, UT 84660
TEL: (801) 804-4503

FIRE
CITY OF SPANISH FORK
JASON TURNER
40 S. MAIN ST.,
SPANISH FORK, UT 84660
TEL: (801) 804-4755

CAUTION NOTICE TO CONTRACTOR

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Know what's **below.** **Call** before you dig.

THIRD SUBMITTAL
DATE: 12/05/22

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
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	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	POM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

COVER SHEET

C 001

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 12:28 PM PHIL MINTON

GENERAL SITE NOTES:

1. PRIOR TO STARTING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION SHALL BEGIN UNTIL ALL PERMITS HAVE BEEN RECEIVED.
2. SITE BOUNDARY, TOPOGRAPHY, UTILITY AND ROAD INFORMATION WAS TAKEN FROM A SURVEY BY JM CIVIL ENGINEERING, 1101 CENTRAL EXPRESSWAY SOUTH, SUITE 215, ALLEN, 75 75013. CONTACT: SCOTT BERGHERR (214) 491–1830.
3. IF THE CONTRACTOR, IN THE COURSE OF THE WORK, FINDS ANY DISCREPANCIES BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS OF THE LOCALITY, OR ANY ERRORS OR OMISSIONS IN THE PLANS OR IN THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO IMMEDIATELY INFORM THE ENGINEER, IN WRITING, AND THE ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH A DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTOR'S RISK.
4. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS, AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
6. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE STATE AND LOCAL GOVERNMENT AGENCY LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS.
7. ALL ACCESSIBLE SITE FEATURES SHALL BE CONSTRUCTED TO MEET ALL FEDERAL, STATE AND LOCAL CODE.
8. NOTIFY THE CITY INSPECTOR TWENTY–FOUR (24) HOURS BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
9. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS, AND STAKES.
10. ARCHITECTURAL PLANS ARE TO BE USED FOR BUILDING STAKE OUT.
11. ALL DIMENSIONS ARE FROM FACE OF BUILDING, CURB, AND WALL UNLESS OTHERWISE SPECIFIED ON PLANS.
12. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
13. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATION.
14. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
15. FOR WORK IN, OR ADJACENT TO, HIGHWAY RIGHT OF WAYS, CONTRACTOR SHALL ENSURE APPROPRIATE PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION. CONTRACTOR TO ERECT AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES IN CONFORMANCE WITH THE STATE MANUAL OF TRAFFIC CONTROL DEVICES, LATEST EDITION, ALONG WITH THE REQUIREMENTS OF THE LOCAL D.O.T. AREA OFFICE.
16. ALL CURB RADII SHALL BE 3' OR 10' UNLESS OTHERWISE NOTED ON THE PLANS.
17. DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

GENERAL UTILITY NOTES:

1. CONTRACTOR IS TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND ENSURE NO CONFLICTS EXIST WITH PROPOSED IMPROVEMENTS. NOTIFY ENGINEER IMMEDIATELY IF UTILITIES ARE LOCATED DIFFERENTLY THAN SHOWN. THE CONTRACTOR SHALL COORDINATE WITH EACH RESPECTIVE UTILITY COMPANY IN ORDER TO RELOCATE IF NEEDED IN CONFORMANCE WITH THEIR GUIDELINES.
2. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO THE REMOVAL OF INDICATED UTILITIES ON SITE (SEE DEMOLITION PLAN). CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS REQUIRED FOR DEMOLITION AND HAUL OFF FROM THE APPROPRIATE AUTHORITIES.
3. AUTHORIZATION MUST BE OBTAINED FROM THE LOCAL JURISDICTION WATER SYSTEM TO CONSTRUCT, ALTER OR MODIFY A WATER OR SEWER LINE. CONSTRUCTION OF WATER AND SEWER INFRASTRUCTURE WILL BE AUTHORIZED BY THE WATER SYSTEM UPON:
   - APPROVAL OF SUBMITTED PLANS.
   - NOTIFICATION OF THE WATER SYSTEM AT LEAST 24 HOURS PRIOR TO STARTING CONSTRUCTION.
4. AT THE COMPLETION OF THE WATER AND/OR SEWER CONSTRUCTION AND PRIOR TO RECORDING THE FINAL PLAT, THE CONTRACTOR WILL FURNISH THE WATER SYSTEM INSPECTOR RECORD DRAWINGS OF THE PROJECT.
5. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE GAS COMPANY FOR THE CONSTRUCTION OF THE GAS LINE BETWEEN METER AND MAIN.
6. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE POWER COMPANY FOR THE CONSTRUCTION OF ELECTRICAL CONDUIT TO PROVIDE SERVICE TO THE TRANSFORMER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING, PRIOR TO CONSTRUCTION, ALL EXISTING LOCATIONS AND INVERT ELEVATIONS OF SANITARY SEWERS, STORM DRAINAGE, AND WATER MAINS. IF ANY INVERT ELEVATION VARIES MORE THAN 0.1 FT. FROM RECORD ELEVATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. WORK SHALL NOT PROCEED UNTIL THE CONTRACTOR IS NOTIFIED BY THE ENGINEER.
8. CONNECT TO EXISTING UTILITIES AND INSTALL UTILITIES IN COMPLIANCE WITH REQUIREMENTS OF APPROPRIATE JURISDICTIONAL AGENCIES.
9. COORDINATE WITH BUILDING PLANS TO ASSURE ACCURACY OF UTILITY CONNECTIONS AND COMPLIANCE WITH LOCAL CODES.
10. ALL SEWERS TO BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING CLEANING OF ANY SILT OR DEBRIS ACCUMULATED IN STRUCTURES.
11. ALL SURPLUS EXCAVATED MATERIAL FROM THE TRENCH SHALL BE DISPOSED OFF THE SITE BY CONTRACTOR.
12. COORDINATE EXACT TRENCHING, ROUTING, AND POINT OF TERMINATION WITH ALL UTILITY COMPANIES.
13. MINIMUM SEPARATION BETWEEN WATER AND SANITARY SEWER LINES SHALL BE A MINIMUM OF 10' HORIZONTALLY AND 18" VERTICALLY.

GENERAL EROSION CONTROL NOTES:

1. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND BECOME FAMILIAR WITH UPDES PERMIT UTR090000 PLAN AND ITS CONTENTS.
2. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
3. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
4. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
5. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
6. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
7. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
8. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READLY AVAILABLE TO CONTAIN AND CLEAN–UP FUEL OR CHEMICAL SPILLS AND LEAKS.
9. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
10. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
11. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN SHALL BE INITIATED AS SOON AS PRACTICABLE.
12. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
13. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
14. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
15. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
16. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
17. ON–SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
18. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION. SLOPES LEFT EXPOSED WILL, WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.
19. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.
20. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

GENERAL DEMOLITION NOTES:

1. ANY DEMOLITION IS TO BE PERFORMED IN STRICT CONFORMANCE WITH ALL APPLICABLE CITY, COUNTY AND STATE, AND/OR GOVERNING BODY'S STANDARDS.
2. THE DEMOLITION PLAN SHALL BE DONE IN CONJUNCTION WITH THE GEOTECHNICAL INVESTIGATION REPORT.
3. EROSION AND SEDIMENT CONTROL MEASUREMENTS SHALL BE MAINTAINED AT ALL TIMES DURING DEMOLITION.
4. THE PURPOSE OF THIS DRAWING IS TO CONVEY THE OVERALL SCOPE OF WORK AND IT IS NOT INTENDED TO COVER ALL DETAILS OR SPECIFICATIONS REQUIRED TO COMPLY WITH GENERALLY ACCEPTED DEMOLITION PRACTICES. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE SITE, SCOPE OF WORK, AND ALL EXISTING CONDITIONS AT THE JOB SITE PRIOR TO BIDDING AND COMMENCING THE WORK. THE DEMOLITION CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, OR PROCEDURES USED TO COMPLETE THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND IS LIABLE FOR THE SAFETY OF THE PUBLIC OR CONTRACTOR'S EMPLOYEES DURING THE COURSE OF THE PROJECT.
5. THE DEMOLITION PLAN IS INTENDED TO SHOW REMOVAL OF KNOWN SITE FEATURES AND UTILITIES AS SHOWN ON THE SURVEY. THERE MAY BE OTHER SITE FEATURES, UTILITIES, STRUCTURES, AND MISCELLANEOUS ITEMS BOTH BURIED AND ABOVE GROUND THAT ARE WITHIN THE LIMITS OF WORK THAT MAY NEED TO BE REMOVED FOR THE PROPOSED PROJECT THAT ARE NOT SHOWN HEREON. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF SUCH ITEMS AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL CONTACT RESPECTIVE UTILITY COMPANIES PRIOR TO DEMOLITION TO COORDINATE DISCONNECTION AND REMOVAL OF EXISTING UTILITIES WITHIN THE AREA OF WORK.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES THAT ARE INTENDED TO CONTINUE TO PROVIDE SERVICE WHETHER THESE UTILITIES ARE SHOWN ON THE PLAN OR NOT.
8. UPON DISCOVERY OF ANY UNDERGROUND TANKS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE. NO REMOVAL OF TANKS SHALL OCCUR UNTIL AUTHORIZED BY OWNER.
9. BUILDING AND APPURTENANCES DESIGNATED FOR DEMOLITION SHALL NOT BE DISTURBED BY THE CONTRACTOR UNTIL HE HAS FURNISHED WITH NOTICE TO PROCEED BY THE OWNER. AS SOON AS SUCH NOTICE HAS BEEN GIVEN, THE CONTRACTOR SHALL PERFORM THE DEMOLITION, UNDER THE DIRECTION OF THE OWNER'S REPRESENTATIVE.
10. ALL EXISTING UTILITIES WITHIN THE EXISTING BUILDING ARE TO BE REMOVED, WHERE CONFLICTS OCCUR WITH GRADE, BEAMS, PILES, PROPOSED UTILITIES AND TRENCH BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL REPORT.
11. FOUNDATIONS, FLOORS, FLOOR SLABS, AND ANY OTHER UNDERGROUND BUILDING STRUCTURES SHALL BE REMOVED IN ACCORDANCE WITH THE SPECIFICATIONS. AREAS OF STRUCTURE REMOVAL SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATIONS AND THE GEOTECHNICAL REPORT.
12. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL UNSUITABLE MATERIAL AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL CITY, STATE, AND FEDERAL LAWS AND ORDINANCES.
13. ALL MATERIAL, EXCEPT THAT BELONGING TO A PUBLIC UTILITY COMPANY OR DENOTED FOR SALVAGE, SHALL BECOME PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE OWNER OF WATER, ELECTRIC, OR GAS METERS WHEN THE METERS ARE READY FOR REMOVAL, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING ALL UTILITIES IN COMPLIANCE WITH LOCAL REQUIREMENTS. DISCONNECT TRANSFORMERS AS REQUIRED FOR BUILDING DEMOLITION.
14. AS SOON AS DEMOLITION WORK HAS BEEN COMPLETED, THE FINAL GRADE OF BACKFILL IN DEMOLITION AREAS SHALL BE COMPACTED PER THE GEOTECHNICAL REPORT TO PRESENT A NEAT, WELL DRAINED APPEARANCE, AND TO PREVENT WATER FROM DRAINING UNNECESSARILY ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL GRADE SITE TO EXISTING STORM DRAINAGE SYSTEM TO REMAIN ON SITE.
15. EXISTING TREES TO REMAIN SHOULD BE PROTECTED FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
16. THE CONTRACTOR IS TO COORDINATE WORK IN THIS PROJECT TO ENSURE ACCESS TO ADJACENT PROPERTIES AT ALL TIMES.

GENERAL PAVING NOTES:

1. CONTRACTOR MUST SECURE ALL NECESSARY PERMITS PRIOR TO STARTING WORK.
2. REFER TO GEOTECH REPORT FOR PREPARATION OF THE SUBGRADE.
3. IF THE CONTRACTOR, IN THE COURSE OF THE WORK, FINDS ANY DISCREPANCIES BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS OF THE LOCALITY, OR ANY ERRORS OR OMISSIONS IN THE PLANS OR IN THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO IMMEDIATELY INFORM THE ENGINEER, IN WRITING, AND THE ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH A DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTOR'S RISK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS, AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
5. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE STATE AND LOCAL GOVERNMENT AGENCY LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS.
6. ALL ACCESSIBLE SITE FEATURES SHALL BE CONSTRUCTED TO MEET ALL FEDERAL, STATE AND LOCAL CODE.
7. NOTIFY THE CITY INSPECTOR TWENTY–FOUR (24) HOURS BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
8. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS, AND STAKES.
9. ARCHITECTURAL PLANS ARE TO BE USED FOR BUILDING STAKE OUT.
10. ALL DIMENSIONS ARE FROM FACE OF BUILDING, CURB, AND WALL UNLESS OTHERWISE SPECIFIED ON PLANS.
11. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
12. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATION.
13. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
14. ALL ROAD WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE AND LOCAL GOVERNMENT AGENCY SPECIFICATIONS.

GENERAL GRADING/DRAINAGE NOTES:

1. ALL GRADING AND SITE PREPARATION SHALL CONFORM WITH SPECIFICATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
2. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE CITY LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS.
3. PRIOR TO ANY EXCAVATION OF THE PROJECT SITE, THE CONTRACTOR SHALL NOTIFY THE CITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS AND STAKES.
5. ALL INDICATED ELEVATIONS ARE FINISHED ELEVATIONS.
6. FIELD VERIFY LOCATIONS, SIZES AND IF APPLICABLE INVERTS OF EXISTING UTILITIES FOR PROPOSED CONNECTIONS PRIOR TO CONSTRUCTION.
7. LOCATE AND PROTECT ALL UTILITIES ASSOCIATED WITH THE PROJECT PRIOR TO CONSTRUCTION.
8. INSTALL SILT CONTROL MEASURES BEFORE BEGINNING SITE WORK. THESE MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
9. MAINTAIN PROPER SITE DRAINAGE AT ALL TIMES DURING CONSTRUCTION. PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.
10. INSTALL ALL APPROPRIATE TREE PROTECTION MEASURES PRIOR TO GRADING.
11. CUT AND FILL SLOPES SHALL HAVE A MAXIMUM SLOPE OF 4:1.
12. ALL EXCAVATION SHALL INCLUDE CLEARING, STRIPPING AND STOCKPILING TOPSOIL, REMOVING UNSUITABLE MATERIALS, THE CONSTRUCTION OF EMBANKMENTS, CONSTRUCTION FILLS, AND THE FINAL SHAPING AND TRIMMING TO THE THE LINES AND GRADES SHOWN ON THE PLANS.
13. ALL TREES, BRUSH, AND ORGANIC TOPSOIL AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED, UNLESS OTHERWISE SPECIFIED, AND DISPOSED OF AT AN OFF–SITE LOCATION, WITH THE EXCEPTION THAT ENOUGH TOPSOIL SHALL BE RETAINED FOR RESPREAD AND GENERAL LANDSCAPING. AREAS WHICH ARE TO BE FILLED SHALL BE COMPACTED TO A MAXIMUM DENSITY OF 95% AS DETERMINED BY THE MODIFIED AASHTO COMPACTION TEST IN THE PAVED AREAS AND 85% IN THE OTHER AREAS.
14. STRIP AND STOCKPILE TOPSOIL. SPREAD FOUR (4) INCHES MINIMUM OF TOPSOIL ON LANDSCAPE AREAS AND REMOVE EXCESS TOPSOIL FROM SITE. PREPARE SUB–GRADE FOR PAVEMENT AND CURBS AND BACKFILL CURBS AFTER CURB CONSTRUCTION.
15. PROVIDE SUPPLY OF TOPSOIL FOR LANDSCAPE CONTRACTOR FOR INSTALLATION IN ALL LANDSCAPE ISLANDS.
16. PROVIDE AND INSTALL TOPSOIL IN DISTURBED AREAS TO BE GRASSED, TO INCLUDE PAVEMENT SHOULDERS AND DETENTION AREAS.
17. ALL EARTHWORK AND BASE COURSE FOR THE PARKING AREA SHALL BE COMPACTED TO A MINIMUM OF 95% MODIFIED LABORATORY DENSITY. CERTIFICATION SAID COMPACTION SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER, OR HIS/HER REPRESENTATIVE, PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL. BOTH PROOF ROLLING AND COMPACTION TESTING MUST BE APPROVED AND WITNESSED BY THE ENGINEER OR OWNER REPRESENTATIVE.
18. THE PAVEMENT SUBGRADE AND BASE COURSE MATERIAL SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR OWNER REPRESENTATIVE PRIOR TO CONSTRUCTING THE BASE AND SURFACE COURSES THEREON.
19. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE TO ALL INLETS AND CATCH BASINS. AREAS OF SURFACE PONDING SHALL BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
20. IF AREAS ARE DISTURBED BEYOND PROPOSED GRADES BY NEGLIGENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY REGRADING OR REPAIR TO MATCH ORIGINAL EXISTING CONDITIONS.
21. SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. SHORING SHALL BE IN ACCORDANCE WITH ALL O.S.H.A AND LOCAL REGULATIONS.
22. STRUCTURES FOR STORM SEWERS SHALL BE IN ACCORDANCE WITH THESE IMPROVEMENT PLANS AND THE APPLICABLE STANDARD SPECIFICATIONS. WHERE GRANULAR TRENCH BACKFILL IS REQUIRED AROUND THESE STRUCTURES, THE COST SHALL BE CONSIDERED AS INCIDENTAL AND SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE STRUCTURE.
23. CONFIRM INVERTS OF ALL EXISTING STORM INLETS AND SANITARY SEWER MANHOLES BEFORE COMMENCING CONSTRUCTION.
24. ALL STORM SEWER LINES 18"–54" DIAMETER ARE TO BE REINFORCED CONCRETE PIPE ACCORDING TO ASTM C–76 TYPE III, UNLESS OTHERWISE SPECIFIED ON PLANS.
25. A GEOTEXTILE MATTING (LANDLOCK TRM 450 OR EQUIVALENT) SHALL BE USED FOR EROSION CONTROL AN ALL SLOPES GREATER THAN 3H:1V.
26. DRAINAGE STRUCTURES AND DETENTION POND SHALL BE MAINTAINED BY PROPERTY OWNERS.
27. CONTRACTOR SHALL ADHERE TO PROPOSED GRADES ALONG CREEKS, ESPECIALLY IN THE AREA OF THE PROPOSED DETENTION POND. IF AREAS ARE DISTURBED BEYOND PROPOSED GRADES BY NEGLIGENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY PENALTIES INCURRED.
28. ALL PROPOSED SPOT ELEVATIONS SHOWN INDICATE FINISHED GRADED ELEVATIONS AT EDGE OF PAVEMENT AND/OR GRADE BREAKS, UNLESS OTHERWISE NOTED.

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM–TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

GENERAL NOTES

C 050

J:\TAKE FIVE OIL\JM–TF021032 – SPANISH FORK, UT_CURRENT DRAWINGS\JM–TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 12:28 PM PHIL MINTON

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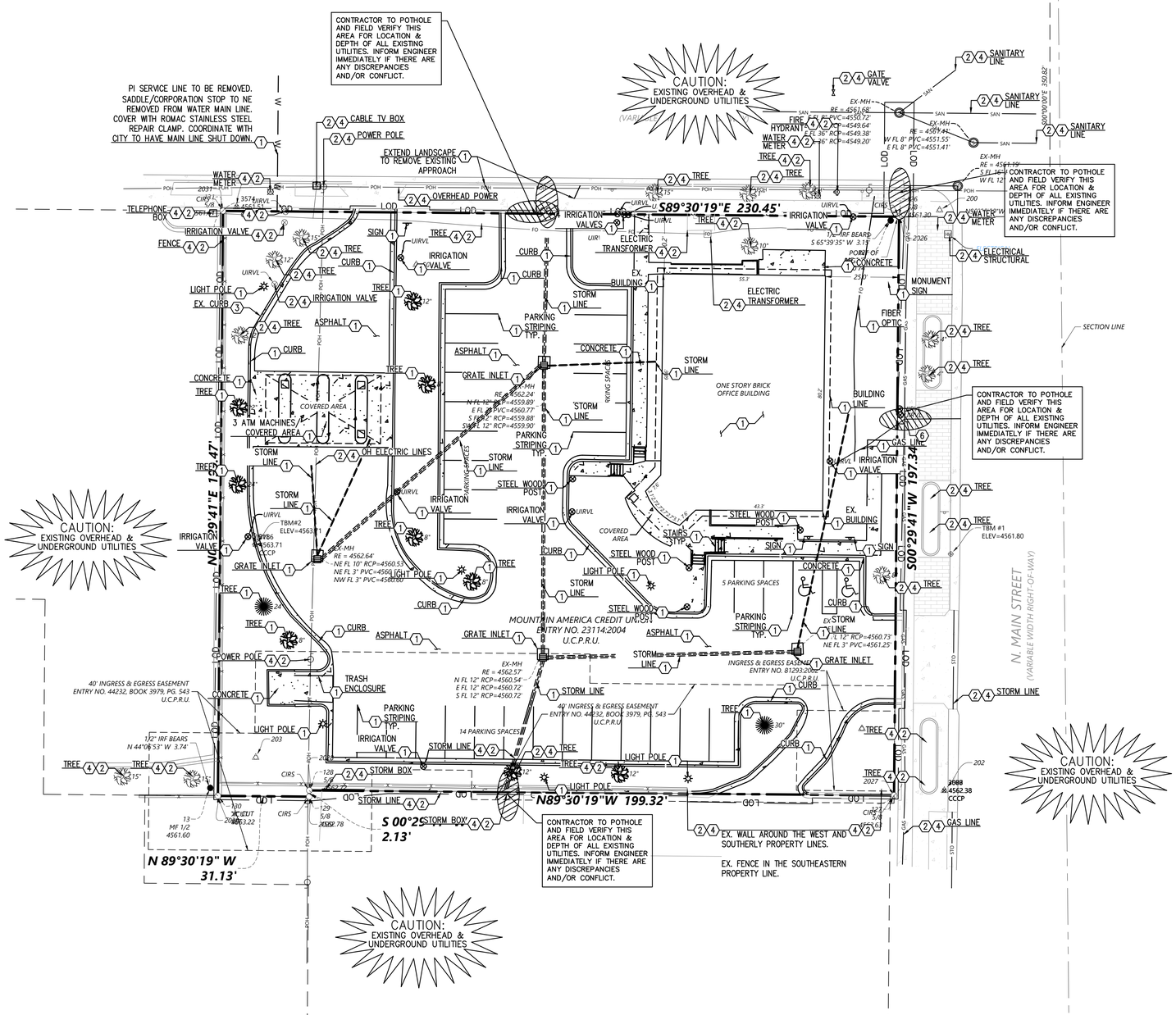
BENCHMARKS

TBM #1: AN "X" CUT ON TOP OF CONCRETE PAVING WITHIN N. MAIN STREET RIGHT-OF-WAY, LOCATED NEAR THE EAST PROPERTY LINE, APPROXIMATELY 2 FEET EAST AND 14 FEET SOUTH OF A SIGN POST. ELEVATION=4561.80 FEET.

TBM #2: AN "X" CUT ON TOP OF A CONCRETE BACK OF CURB LOCATED WITHIN THE SUBJECT PROPERTY NEAR THE WEST PROPERTY LINE AND LOCATED APPROXIMATELY 19 FEET WEST AND 39 FEET NORTH OF A POWER POLE. ELEVATION=4563.71 FEET.

FLOODNOTE

ACCORDING TO THE F.I.R.M. NO. 49049C0757F, THE SUBJECT PROPERTY LIES IN ZONE X AND DOES NOT LIE WITHIN A FLOOD PRONE HAZARD AREA, PER MAP REVISION DATED JUNE 19, 2020.



GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
- CONIFEROUS TREE
- FOUND MONUMENT / SET MONUMENT
- ELECTRIC BOX
- ELECTRIC METER
- POWER POLE WITH LIGHT
- GUY WIRE
- POWER POLE
- TELEPHONE BOX
- SIGN
- CABLE TV BOX
- LIGHT POLE
- STEEL/WOOD POST
- ELECTRIC BOX
- HANDICAPPED PARKING SPACE
- SECTION LINE
- BOUNDARY LINE
- OFF-SITE PROPERTY LINE
- EASEMENT LINE
- FIBER LINE
- POWER OVERHEAD
- CURB & GUTTER
- CONCRETE SURFACE
- ASPHALT SURFACE
- BRICK PAVERS
- WATERMAIN
- SANITARY SEWER
- UNDERGROUND GAS LINE
- POWER UNDERGROUND
- STORM SEWER

U.C.P.R.U.	UTAH COUNTY PUBLIC RECORDS, UTAH
TBM	TEMPORARY BENCHMARK
"X" CUT	"X" CUT IN CONCRETE
IRF	IRON ROD FOUND
CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

- PROPERTY LINE
- POTHOLE
- LIMITS OF FULL DEPTH SAWCUT
- LOD — APPROXIMATE LIMITS OF DISTURBANCE

DEMOLITION KEY NOTES:

1. EXISTING TO BE REMOVED.
2. EXISTING TO REMAIN.
3. ADJUST TO FINISHED GRADE.
4. EXISTING TO BE PROTECTED.
5. EXISTING TO BE RELOCATED.
6. POTHOLE PRIOR TO CONSTRUCTION TO IDENTIFY EXISTING UTILITIES

Know what's **below.** **Call** before you dig.

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Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER — No. 10527678-2202 — JOHN T. MEASELS — STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH

891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	POM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

DEMOLITION PLAN

C 060

J:\TAKE FIVE CIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/6/2022 11:42 AM PHIL MINTON

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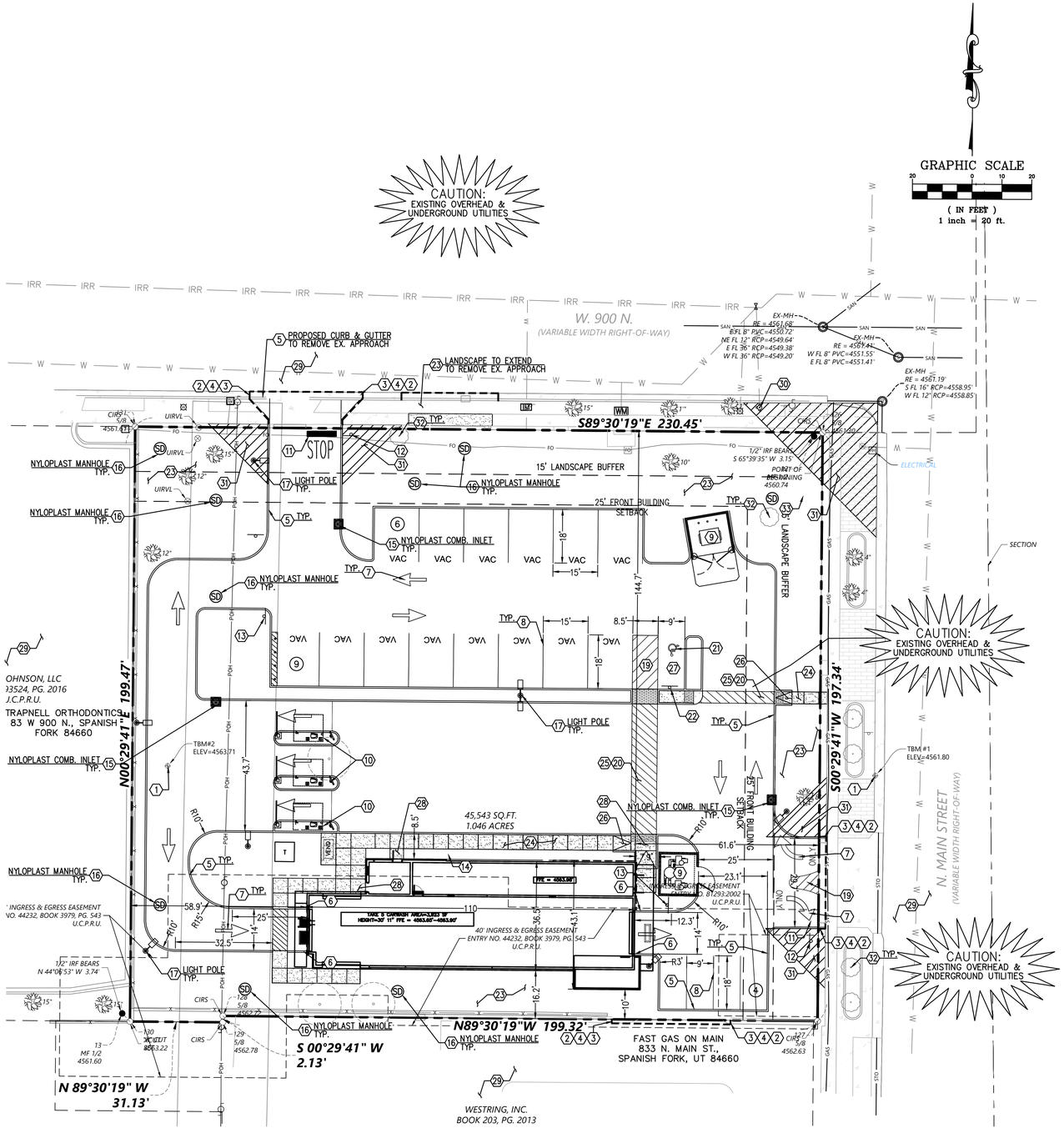
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STATEMENT:

ALL DRINKING WATER AND PRESSURIZED IRRIGATION LINES UP TO AND INCLUDING THE METER, ALL SANITARY SEWER MAINS, ALL ELECTRICAL METERS, AND ALL ELECTRIC AND SFCN COMMUNICATION SERVICE LINES UP TO THE MAST ON OVERHEAD INSTALLATIONS AND TO THE TOP OF THE METER BASE FOR UNDERGROUND INSTALLATIONS ARE DEDICATED TO SPANISH FORK CITY.



EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
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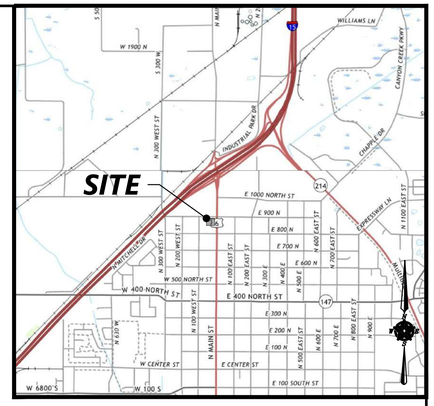
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PROPOSED LEGEND:

- PROPOSED CURB & GUTTER
- LIMITS OF FULL DEPTH SAWCUT
- FIRELANE
- STOP BAR STRIPING
- ACCESSIBLE SPACES
- ADA RAMP
- BOLLARD
- SIGN
- SAND/OIL INTERCEPTOR
- RECLAIM TANK
- CLEAN-OUT
- DOUBLE CLEAN-OUT
- SANITARY SEWER MANHOLE
- SAMPLE PORT
- PROPOSED TRANSFORMER PAD
- LIGHT POLE
- GAS METER
- WATER METER
- IRRIGATION METER
- NYLOPLAST COMBINATION INLET
- NYLOPLAST MANHOLE
- NYLOPLAST GRATE INLET

SITE KEY NOTES:

1. BENCHMARK.
2. LIMITS OF FULL DEPTH SAWCUT AND PAVEMENT REMOVAL..
3. MATCH EXISTING PAVEMENT ELEVATION.
4. MATCH EXISTING CURB.
5. CONCRETE CURB AND GUTTER. (PER LOCAL CODES)
6. TAPER CURB TO 0'
7. DIRECTIONAL TRAFFIC ARROW. (PER LOCAL CODES)
8. PARKING STALL STRIPING. (PER LOCAL CODES)
9. DUMPSTER/VACUUM ENCLOSURE. (PER ARCH. PLANS)
10. SELF SERVICE PAYMENT KIOSK (PER ARCH. PLANS).
11. STOP BAR. (PER LOCAL CODES)
12. STOP SIGN.
13. DO NOT ENTER SIGN.
14. ONE WAY SIGN (POINTING TO WEST).
15. NYLOPLAST COMBINATION INLET.
16. NYLOPLAST MANHOLE.
17. NYLOPLAST GRATE INLET.
17. LIGHT POLE. (PER ARCH. PLANS)
18. CURB CUT. (REFER TO NOTE FOR SIZE)
19. 4" WIDE PAINTED STRIPES, 2' OFF CENTER @ 45°.
20. PEDESTRIAN/ACCESSIBLE CROSSWALK STRIPING.
21. ACCESSIBLE STRIPING & SYMBOL. (TYPICAL-PER ADA AND LOCAL REQUIREMENTS)
22. ACCESSIBLE SIGNS. (TYPICAL-PER ADA AND LOCAL REQUIREMENTS)
23. LANDSCAPE AREA. (PER LANDSCAPE PLAN)
24. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ SIDEWALK.
25. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ CROSSWALK.
26. 2.00% MAX CROSS-SLOPE AND 8.33% MAX LONGITUDINAL SLOPE @ RAMPS.
27. 2.00% MAX IN ALL DIRECTIONS @ ADA PARKING STALL.
28. 2.00% MAX IN ALL DIRECTIONS @ LEVEL LANDINGS.
29. EXISTING PAVEMENT TO REMAIN.
30. EXISTING FIRE HYDRANT
31. VISION TRIANGLE (PER LOCAL REQUIREMENTS)
32. LOCATION OF EXISTING TREES. FIELD VERIFY.
33. LOCATION OF EXISTING SIGN. FIELD VERIFY.



LOCATION MAP

1" = 2000'

SITE DATA TABLE

LOCATION:	891 N. MAIN ST., SPANISH FORK, UT 84660	
LOT AREA:	1.07 AC. (46,610 S.F.)	
ZONING:	ZONING: C-2, GEN. COMM.	
CURRENT USE:	BANK	
PROPOSED USE:	CAR WASH	
BUILDING DATA:		
BUILDING AREA	3,897 S.F.	
BUILDING HEIGHT	27'-3" (1 STORY)	
BUILDING COVERAGE	11.96%	
F.A.R.	8.36:1	
PARKING SUMMARY: MIN. 1:200 S.F.	**REQUIRED**	**PROVIDED**
PARKING SPACES (9'x18')	19	5
ACCESSIBLE SPACES	1	1
TOTAL SPACES	19	6
VACUUMS	13-14	17
LANDSCAPE:		
PERVIOUS:	15,489.12 S.F.	
IMPERVIOUS:	31,120.88 S.F.	

DEVELOPMENT SITE PLAN

DEVELOPER:	DRIVEN BRANDS
	6300 SOUTH SYRACUSE WAY
	STE. 290 GREENWOOD
	VILLAGE, CO 80111
ENGINEER:	ANDRE SUTIONO,
	JM CIVIL ENGINEERING
	1101 CENTRAL EXPY S.,
	STE 215, ALLEN, TX 75013
	214-705-3182
	ASUTIONO@JMCIVILENG.COM
SURVEYOR:	SCOTT BERGHERR
	JM CIVIL ENGINEERING
	1101 CENTRAL EXPY S.,
	STE 215, ALLEN, TX 75013
	214-491-1830 EXT 217
	SBERGHERR@JMCIVILENG.COM
ARCHITECT:	ROGER KRAUSE
	PM DESIGN GROUP
	38 EXECUTIVE PARK
	STE 310 IRVINE, CA 92614
	949-562-1722
	RKRAUSE@PMDGINC.COM

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John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH

12/05/22

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PROJECT NO: JM-TF021032
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ISSUE DATE: 12/05/22

SITE PLAN

C 100

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 12:58 PM PHIL MINTON

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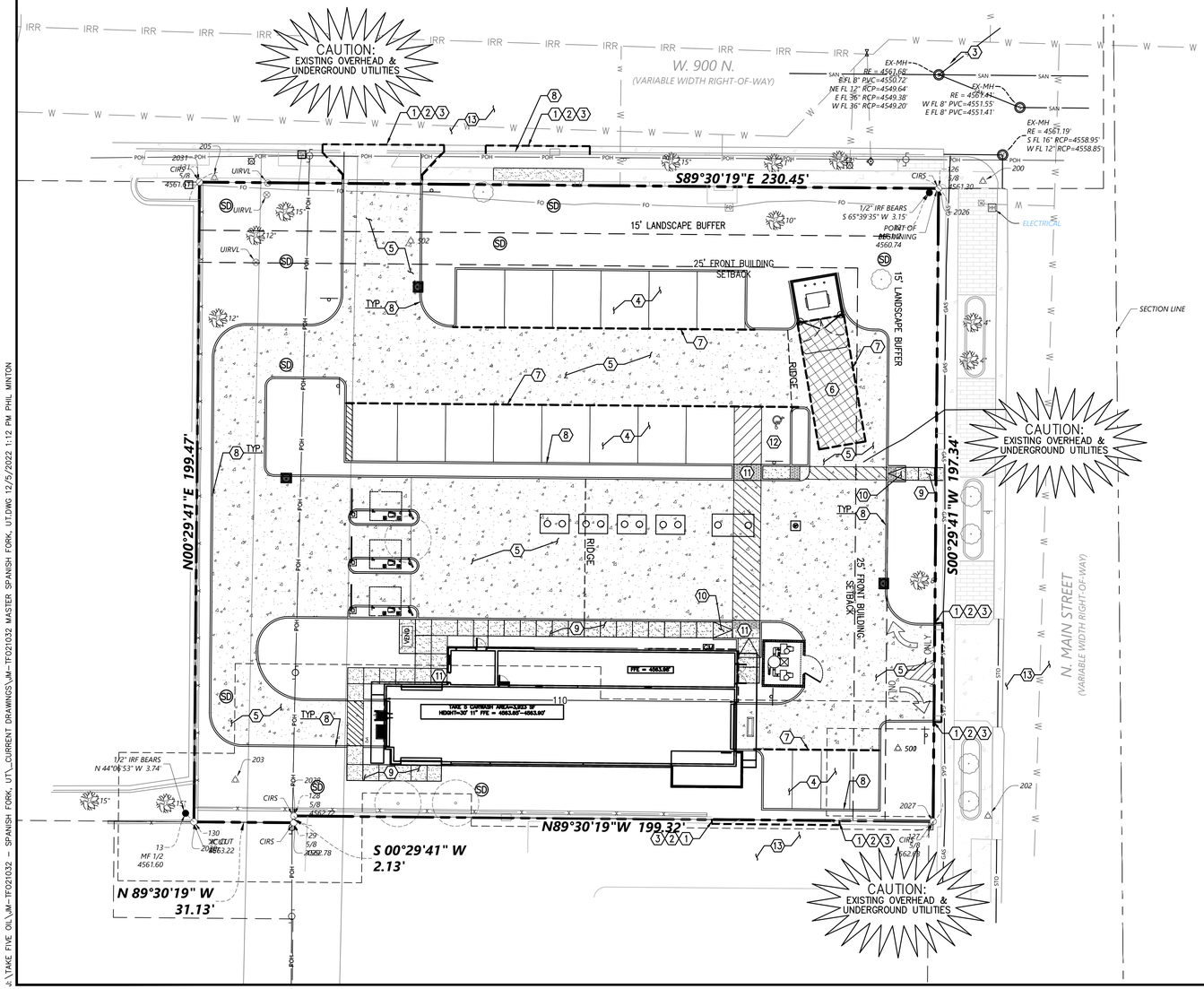
BENCHMARKS

TBM #1: AN "X" CUT ON TOP OF CONCRETE PAVING WITHIN N. MAIN STREET RIGHT-OF-WAY, LOCATED NEAR THE EAST PROPERTY LINE, APPROXIMATELY 2 FEET EAST AND 14 FEET SOUTH OF A SIGN POST. ELEVATION=4561.80 FEET.

TBM #2: AN "X" CUT ON TOP OF A CONCRETE BACK OF CURB LOCATED WITHIN THE SUBJECT PROPERTY NEAR THE WEST PROPERTY LINE AND LOCATED APPROXIMATELY 19 FEET WEST AND 39 FEET NORTH OF A POWER POLE. ELEVATION=4563.71 FEET.

FLOODNOTE

ACCORDING TO THE F.I.R.M. NO. 49049C0757F, THE SUBJECT PROPERTY LIES IN ZONE X AND DOES NOT LIE WITHIN A FLOOD PRONE HAZARD AREA, PER MAP REVISION DATED JUNE 19, 2020.



GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

PAVING KEY NOTES:

1. MATCH EXISTING PAVEMENT ELEVATION.
2. MATCH EXISTING CURB.
3. LIMITS OF FULL DEPTH SAWCUT AND PAVEMENT REMOVAL.
4. LIGHT DUTY CONCRETE PAVEMENT.
5. MEDIUM DUTY CONCRETE PAVEMENT.
6. HEAVY DUTY CONCRETE PAVEMENT
7. CONSTRUCTION JOINT.
8. PROPOSED CONCRETE CURB AND GUTTER. (PER LOCAL CODE)
9. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ SIDEWALK.
10. 2.00% MAX CROSS-SLOPE AND 8.33% MAX LONGITUDINAL SLOPE @ RAMPS.
11. 2.00% MAX IN ALL DIRECTIONS @ LEVEL LANDINGS.
12. 2.00% MAX IN ALL DIRECTIONS @ ADA PARKING STALL.
13. EXISTING PAVEMENT TO REMAIN.

PROPOSED PAVING LEGEND:

- CONCRETE SIDEWALK. 5' MINIMUM WIDTH WITH FIBER REINFORCEMENT, 5'x5' TOOOLED JOINTS, AN FULL CONSTRUCTION JOINTS EVERY 50'.
- 5" LIGHT DUTY CONCRETE PAVEMENT. AT A MINIMUM 4,000 PSI AT 28 DAYS. #3 BARS @ 18" ON CENTER EACH WAY. REFER TO GEOTECH REPORT, ECS PROJECT #17:5905, FOR SUBGRADE PREPARATION
- 6" MEDIUM DUTY CONCRETE PAVEMENT. AT A MINIMUM 4,000 PSI AT 28 DAYS. #3 BARS @ 18" ON CENTER EACH WAY. REFER TO GEOTECH REPORT, ECS PROJECT #17:5905, FOR SUBGRADE PREPARATION
- 7" HEAVY DUTY CONCRETE PAVEMENT. AT A MINIMUM 4,000 PSI AT 28 DAYS. #3 BARS @ 18" ON CENTER EACH WAY. REFER TO GEOTECH REPORT, ECS PROJECT #17:5905, FOR SUBGRADE PREPARATION
- CONSTRUCTION JOINT

PAVING NOTES:

1. PANELS WIDTH/LENGTH SHALL BE BETWEEN 12'–17'.
2. PANELS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.25:1
3. ALL JOINTS SHALL CONTINUE THROUGH THE CURBING
4. EXPANSION JOINTS SHALL BE PLACED NO MORE THAN 60' O.C.E.W.

811 Know what's **below.** **Call** before you dig.

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH

12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

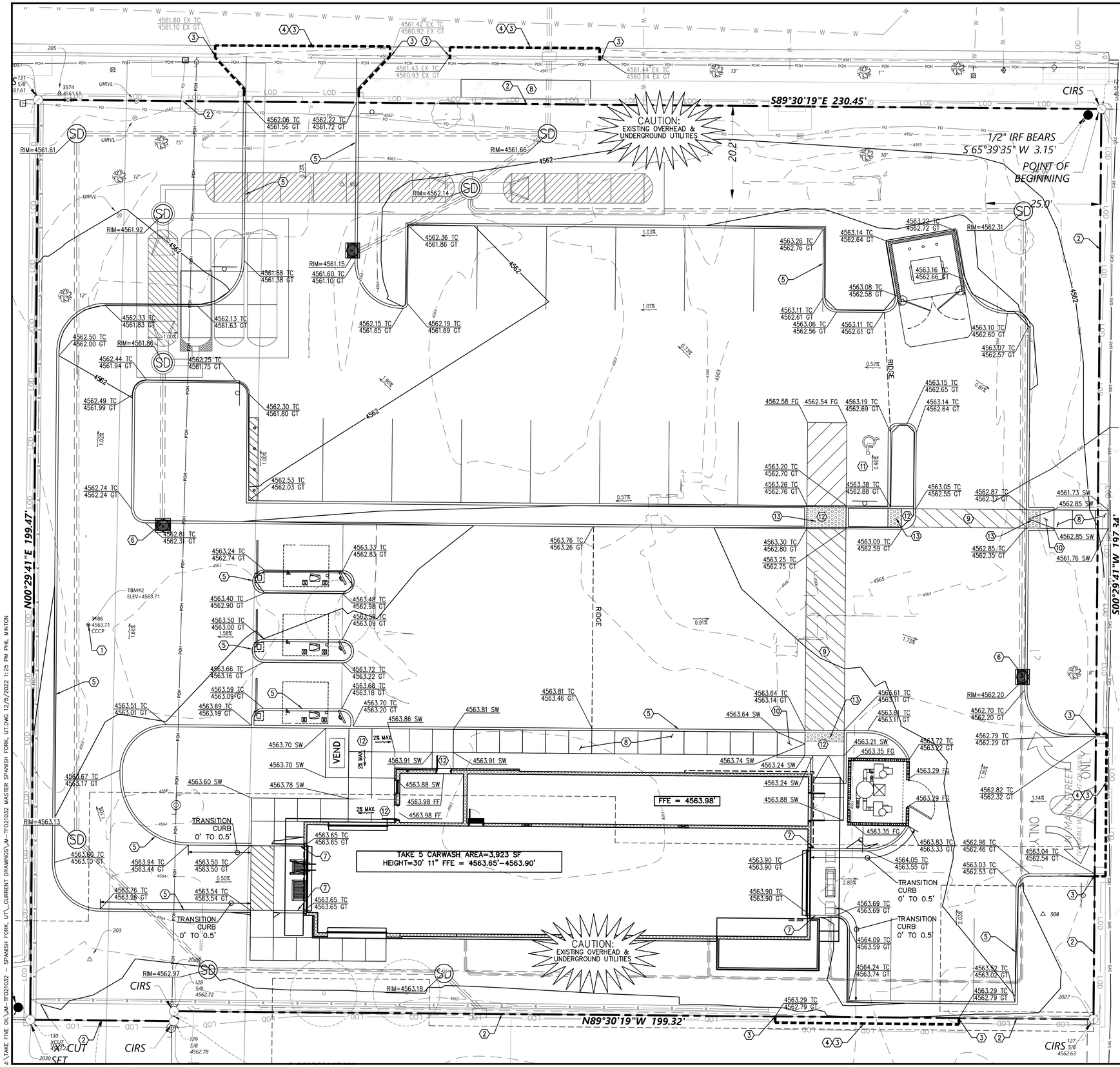
REV	DATE	DESCRIPTION	NAME
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	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

PAVING PLAN

C 200

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:12 PM PHIL MINTON



CAUTION NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 7 DAYS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

BENCHMARKS

TBM #1: AN "X" CUT ON TOP OF CONCRETE PAVING WITHIN N. MAIN STREET RIGHT-OF-WAY, LOCATED NEAR THE EAST PROPERTY LINE, APPROXIMATELY 2 FEET EAST AND 14 FEET SOUTH OF A SIGN POST. ELEVATION=4561.80 FEET.

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FLOODNOTE

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ENGINEER'S NOTE:

1. POT HOLE PRIOR TO CONSTRUCTION TO IDENTIFY LOCATION AND DEPTH OF ALL UTILITIES IN THIS AREA. NOTIFY ENGINEER IMMEDIATELY IF THERE ARE ANY CONFLICTS AND/OR DISCREPANCIES.
2. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF PROPOSED GRADES CANNOT BE MET.
3. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF THERE IS ANY DISCREPANCY FROM PROPOSED GRADES WHILE STAKING.

EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
- CONIFEROUS TREE
- FOUND MONUMENT
- SET MONUMENT
- ELECTRIC BOX
- ELECTRIC METER
- POWER POLE WITH LIGHT
- GUY WIRE
- POWER POLE
- TELEPHONE BOX
- SIGN
- CABLE TV BOX
- LIGHT POLE
- STEEL/WOOD POST
- ELECTRIC BOX
- HANDICAPPED PARKING SPACE
- SECTION LINE
- BOUNDARY LINE
- OFF-SITE PROPERTY LINE
- EASEMENT LINE
- FIBER LINE
- POWER OVERHEAD
- CURB & GUTTER
- CONCRETE SURFACE
- ASPHALT SURFACE
- BRICK PAVERS
- WATERMAIN
- SANITARY SEWER
- UNDERGROUND GAS LINE
- POWER UNDERGROUND
- STORM SEWER
- XXXX EX EXISTING SPOT ELEVATION

U.C.P.R.U. UTAH COUNTY PUBLIC RECORDS, UTAH
TBM TEMPORARY BENCHMARK
"X" CUT "X" CUT IN CONCRETE
IRF IRON ROD FOUND
CIRS 5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

- PROPOSED CURB & GUTTER
- LIMITS OF FULL DEPTH SAWCUT
- FIRELANE
- STOP BAR STRIPING
- ACCESSIBLE SPACES
- ADA RAMP
- BOLLARD
- SIGN
- SAND/OIL INTERCEPTOR
- RECLAIM TANK
- CLEAN-OUT
- DOUBLE CLEAN-OUT
- SANITARY SEWER MANHOLE
- SAMPLE PORT
- NYLOPLAST COMBINATION INLET
- NYLOPLAST MANHOLE
- NYLOPLAST GRATE INLET
- LIGHT POLE
- GAS METER
- WATER METER
- IRRIGATION METER
- XXXX TP TOP OF PAVEMENT ELEVATION
- XXXX TC TOP OF CURB
- XXXX GT GUTTER
- XXXX GR GROUND
- XXXX FF FINISH FLOOR
- XXXX SW SIDEWALK
- XXXX TG TOP OF GRATE

GRADING KEY NOTES:

1. BENCHMARK.
2. MATCH EXISTING GROUND ELEVATION.
3. MATCH EXISTING PAVEMENT ELEVATION.
4. LIMITS OF DISTURBANCE
5. PROPOSED CURB. (PER LOCAL CODE)
6. LOW POINT FOR COMBINATION INLET
7. TAPER CURB.
8. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ SIDEWALK AND ADA PATH OF TRAVEL
9. 2.00% MAX CROSS-SLOPE AND 5.00% MAX LONGITUDINAL SLOPE @ CROSSWALK.
10. 2.00% MAX CROSS-SLOPE AND 8.33% MAX LONGITUDINAL SLOPE @ RAMPS.
11. 2.00% MAX IN ALL DIRECTIONS @ ADA PARKING STALLS
12. 2.00% MAX IN ALL DIRECTIONS @ LEVEL LANDINGS, OPEN SPACES, AND TURNS
13. PROPOSED ADA COMPLIANT TRUNCATED DOMES.
14. EXISTING STRUCTURE, EXISTING GRADE TO REMAIN.
15. EXISTING STRUCTURE TO REMAIN AND PROTECT.

GRAPHIC SCALE
10 0 5 10
(IN FEET)
1 inch = 10 ft.

811 Know what's below. Call before you dig.

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	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

GRADING PLAN

C 300

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:25 PM PHIL MINTON

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ENGINEER'S NOTE:

1. REFER TO LANDSCAPE PLANS FOR MULCHING, SEEDING, AND SOIL STABILIZATION.
2. REFER TO SHEETS C410 FOR SOIL EROSION CONTROL DETAILS AND NOTES.
3. REFER TO SHEET C470 FOR CONCRETE WASHOUT DETAIL.

SEQUENCE OF CONSTRUCTION ACTIVITIES:

A. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCE AND SILT FENCE ACCORDING TO THE APPROXIMATE LOCATION SHOWN ON THE EROSION CONTROL PLAN.

B. CONSTRUCT TEMPORARY INLET TREATMENT AROUND OPEN STORM DRAIN INLETS ACCORDING TO THE EROSION CONTROL PLAN.

C. KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE.

D. BEGIN CLEARING AND GRADING OF SITE.

E. INSTALL WATER, SANITARY SEWER AND STORM DRAIN AS SPECIFIED ON PLAN SHEETS.

F. PAVE STREETS AND SIDEWALKS AS SPECIFIED ON PLAN SHEETS.

G. RE-VEGETATE LOTS, PARKWAYS AND ALL DISTURBED AREAS.

H. REMOVE ALL TEMPORARY EROSION CONTROL DEVICES.

MAINTENANCE:

A. CONTRACTOR TO KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE DURING CONSTRUCTION.

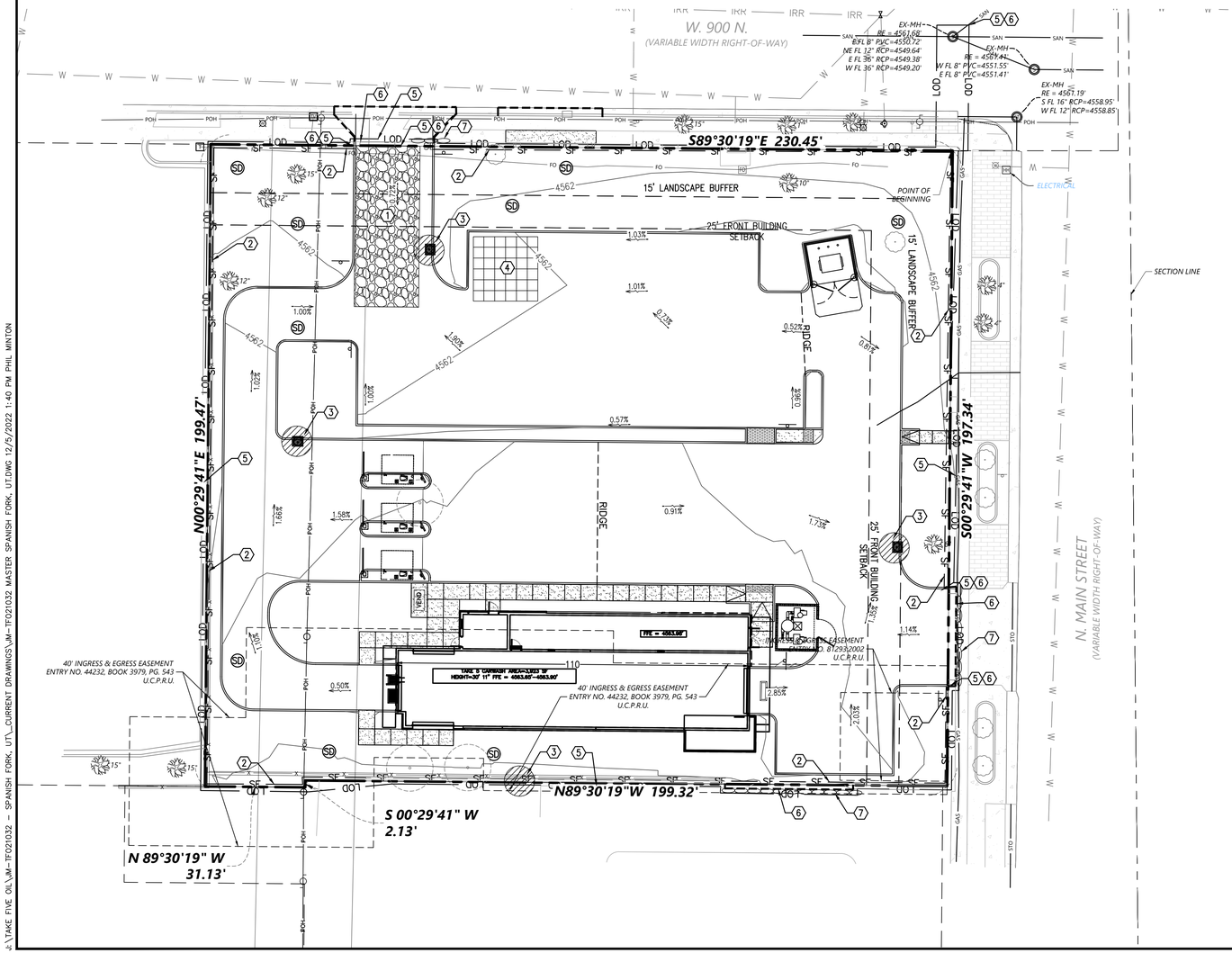
B. CONTRACTOR SHALL MAINTAIN ALONG WITH THE SIGNED EFFECTIVE COPY OF SWP3 DRAWINGS AN UPDATED LIST IDENTIFYING ALL POTENTIAL SOURCES OF POLLUTION INCLUDING PORTA-POTTYS. FUEL TANKS, STAGING AREAS, WASTE CONTAINERS, CHEMICAL STORAGE AREAS, CONCRETE CURE, PAINTS SOLVENTS, ETC., AND A DESCRIPTION OF THE LOCATION.

C. CONTRACTOR TO REMOVE ALL STORM WATER POLLUTION PREVENTION MEASURES AFTER CONSTRUCTION IS COMPLETE AND INSPECTED FOR APPROVAL. LONG TERM MAINTENANCE TO BE PROVIDED BY OWNER.

NOTES:

1. CONTRACTOR SHALL POLICE SITE REGULARLY AND AND KEEP SITE FREE OF TRASH AND CONSTRUCTION DEBRIS.
2. ALL EROSION CONTROL DEVICES SHALL BE CONSTRUCTED AND MAINTAINED IN COMPLIANCE WITH CITY STANDARD EROSION CONTROL DETAILS
3. TOTAL DISTURBED AREA=1.07 ACRES.
4. REFER TO LANDSCAPE PLAN FOR FINAL GROUND STABILIZATION

EROSION AND SEDIMENT CONTROL CONSTRUCTION PHASING:	DURATION OF PHASE	APPROX. DATE FOR START OF EACH PHASE
1. TOP SOIL REMOVAL, CLEARING, GRUBBING AND PAVING REMOVAL	15 DAYS	TBD
2. GRADING.	30 DAYS	TBD
3. UTILITY INSTALLATION.	30 DAYS	TBD
4. PAVING.	30 DAYS	TBD
5. BUILDING CONSTRUCTION.	60 DAYS	TBD
6. FINE GRADING.	15 DAYS	TBD
7. LANDSCAPE AND VEGETATION.	15 DAYS	TBD
8. BMP REMOVAL.	5 DAYS	TBD



GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

EXISTING LEGEND:

SANITARY MANHOLE	ELECTRIC BOX	SECTION LINE
SEWER CLEANOUT	ELECTRIC METER	BOUNDARY LINE
STORM MANHOLE	POWER POLE WITH LIGHT	OFF-SITE PROPERTY LINE
HYDRANT	GUY WIRE	EASEMENT LINE
GATE VALVE	POWER POLE	FIBER LINE
WATER METER	TELEPHONE BOX	POWER OVERHEAD
WATER MANHOLE	SIGN	CURB & GUTTER
DECIDUOUS TREE	CABLE TV BOX	CONCRETE SURFACE
CATCH BASIN	LIGHT POLE	ASPHALT SURFACE
IRRIGATION VALVE	STEEL/WOOD POST	BRICK PAVERS
CONIFEROUS TREE	ELECTRIC BOX	WATERMAIN
FOUND MONUMENT	HANDICAPPED PARKING SPACE	SANITARY SEWER
SET MONUMENT		UNDERGROUND GAS LINE
		POWER UNDERGROUND
		STORM SEWER

U.C.P.R.U.	UTAH COUNTY PUBLIC RECORDS, UTAH
TBM	TEMPORARY BENCHMARK
"X" CUT	"X" CUT IN CONCRETE
IRF	IRON ROD FOUND
CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

	PROPERTY LINE
	PROPOSED CURB & GUTTER
	LIMITS OF FULL DEPTH SAWCUT
XXX	PROPOSED CONTOUR
SF	PROPOSED SILT FENCE
LOD	APPROXIMATE LIMITS OF DISTURBANCE
	SAND BAG FILTER
	10' X 10' CONCRETE WASH AREA
	TEMPORARY INLET PROTECTION
	TEMPORARY CONSTRUCTION ENTRANCE
STOP	STOP BAR STRIPING
	ACCESSIBLE SPACES
	ADA RAMP
	BOLLARD
	SIGN
GM	GAS METER
WM	WATER METER
IM	IRRIGATION METER
	SAND/OIL INTERCEPTOR
	RECLAIM TANK
	CLEAN-OUT
	DOUBLE CLEAN-OUT
SS	SANITARY SEWER MANHOLE
SP	SAMPLE PORT
	NYLOPLAST COMBINATION INLET
SD	NYLOPLAST MANHOLE
	NYLOPLAST GRATE INLET

EROSION CONTROL KEY NOTES:

1. TEMPORARY CONSTRUCTION ENTRANCE.
2. TEMPORARY SILT FENCE.
3. TEMPORARY INLET PROTECTION.
4. 10'x10' CONCRETE WASH AREA.
5. LIMIT OF DISTURBANCE
6. LIMIT OF FULL DEPTH SAWCUT LINE
7. SAND BAG FILTER

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John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH
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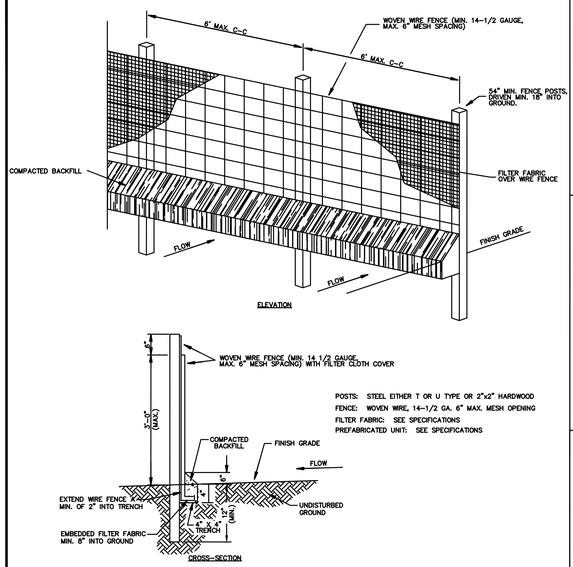
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	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	POM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

SOIL AND EROSION CONTROL PLAN

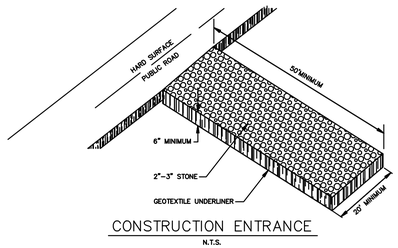
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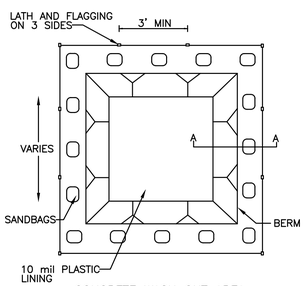


1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE
N.T.S.

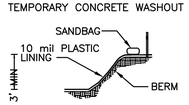


CONSTRUCTION ENTRANCE
N.T.S.

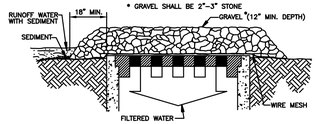


CONCRETE WASH OUT AREA
NTS

NOTES:
1. ACTUAL SIZE DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

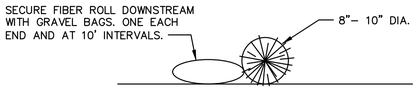


SECTION A-A
NTS



SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED ACRES.

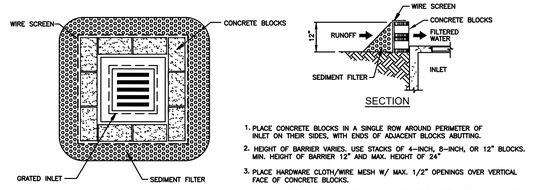
GRAVEL AND WIRE MESH INLET SEDIMENT FILTER
IP3
N.T.S.



NOTES:

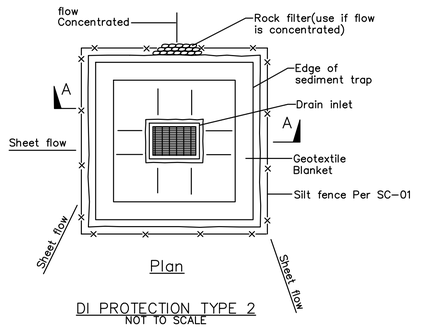
1. STRAW FIBER ROLL SHALL BE PLACED IN A POSITION WHERE RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

FIBER ROLLS (WATTLES)
N.T.S.

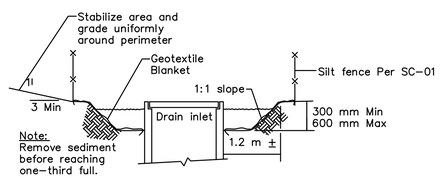


1. PLACE CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF INLET ON THEIR SIDES, WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES. USE STACKS OF 4-INCH, 8-INCH, OR 12" BLOCKS. MIN. HEIGHT OF BARRIER 12" AND MAX. HEIGHT OF 24"
3. PLACE HARDWARE CLOTH/WIRE MESH W/ MAX. 1/2" OPENINGS OVER VERTICAL FACE OF CONCRETE BLOCKS.
4. THE SEDIMENT FILTER SHALL BE ANY NON-ERODIBLE MATERIAL SUCH AS LOOSE ROCK, BROKEN CONCRETE THAT WILL SLOW THE FLOW OF THE WATER AND ALLOW IT TO FILTER THROUGH AND OVER THE MATERIAL BEFORE ENTERING THE INLET.

BLOCK AND AGGREGATE INLET SEDIMENT FILTER
IP1
N.T.S.



DI PROTECTION TYPE 2
NOT TO SCALE



Section A-A

Notes
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction flow.

CATCH BASIN INLET PROTECTION DETAIL
N.T.S.

BEST MANAGEMENT PRACTICES

1. STRUCTURAL MEASURES SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT IN EFFECTIVE OPERATING CONDITION.

2. DOCUMENTATION OF MAINTENANCE ACTIVITIES INCLUDING FREQUENCY, LOT DESIGNATION, INSPECTION OF STRUCTURAL CONTROLS, MATERIAL STORAGE AREAS, VEHICLE ENTRANCES AND EXITS: ACTIONS TAKEN AND INSPECTORS NAME.
3. CONSTRUCTION SITE NOTICE WILL BE MAINTAINED ON SITE
4. COPY OF SWPPP SHALL BE KEPT ON SITE
5. PERIMETER MUST RETAIN THE SWPPP, NOI AND INSPECTION LOG FOR A MINIMUM OF 3 YEARS FROM THE TERMINATION AND FINAL STABILIZATION OF PROJECT

I. WASTE MATERIALS
ALL WASTE MATERIALS INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURED LIDDED METAL DUMPSTER. NO CONSTRUCTION MATERIALS SHALL BE BURIED ON SITE. THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH BE HAULED TO A LICENSED LANDFILL.

II. HAZARDOUS WASTE
AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES SHALL BE CONSIDERED HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS. ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATION, CURING, COMPOUNDS AND ADDITIVES. IN EVENT OF SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPARTMENT AND NMED.

III. SANITARY WASTE
ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV. SPILL PREVENTION
THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURES OF MATERIALS TO STORM WATER RUNOFF.

V. GOOD HOUSEKEEPING
A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB
B. NEATLY STORE MATERIALS ON-SITE IN A SECURE MANNER
C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER
D. DO NOT MIX SUBSTANCES WITH ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER.
E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING OF THE CONTAINER
F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROP USE AND DISPOSAL

VI. HAZARDOUS CONDITIONS
PRACTICES TO REDUCE RISKS:
A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURERS

VII. PETROLEUM PRODUCTS
PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED, ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER RECOMMENDATION.

VIII. SPILL CONTROL PRACTICES:
A. MANUFACTURERS RECOMMENDED METHODS FOR SPILL CLEAN UP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE WARE OF THE PROCEDURE
B. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE
C. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY
D. SPILL AREA SHALL BE WELL VENTILATED AND APPROPRIATE CLOTHING WILL BE WORN
E. ANY SPILL SHALL BE REPORTED TO THE APPROPRIATE GOVERNMENTAL AGENCY
F. MEASURES SHALL BE TAKEN TO PREVENT A SPILL FROM REOCCURRING

IX. MAINTENANCE AND INSPECTION PROCEDURES
ALL POLLUTION PREVENTION MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY 14 DAYS AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR MORE BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY. A RECORD OF THE RESULTS OF THE INSPECTIONS OF THE SITE SHALL BE KEPT ON-SITE

X. REMARKS
DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS, CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS

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PROJECT NO: JM-TFO21032
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SOIL AND EROSION CONTROL DETAILS

C 410

J:\TAKE FIVE OIL\JM-TFO21032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TFO21032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:25 PM PHIL MINTON

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BENCHMARKS

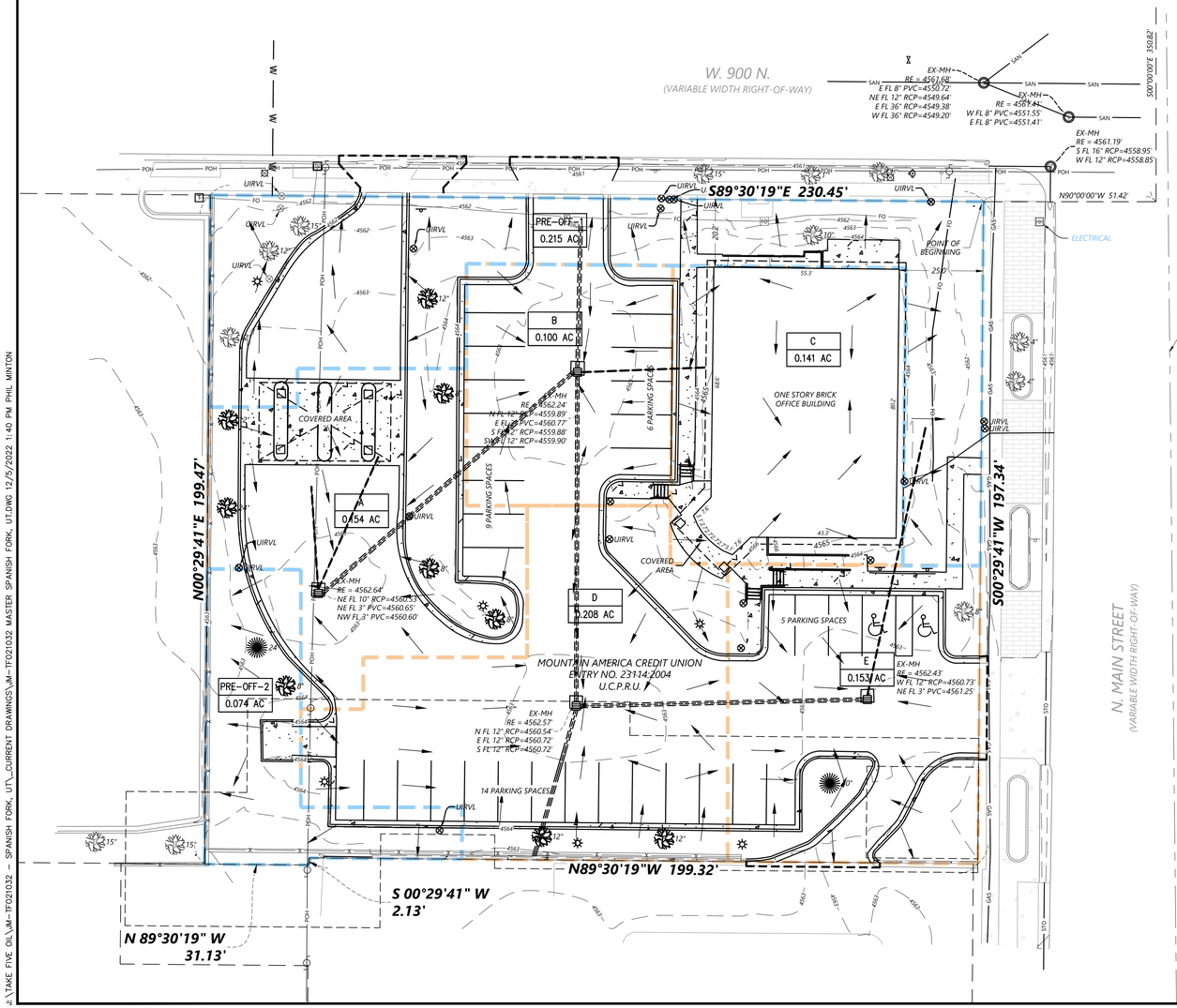
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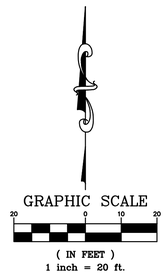
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FLOODNOTE

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DESIGN AREA	PERVIOUS AREA	IMPERVIOUS AREA	TOTAL AREA	RUNOFF COEFFICIENT PERVIOUS (10-YR)	RUNOFF COEFFICIENT IMPERVIOUS (10-YR)	COMPOSITE RUNOFF COEFFICIENT (10-YR)	PERCENT IMPERVIOUS	10 YEAR RAINFALL INTENSITY	25 YEAR RAINFALL INTENSITY	100 YEAR RAINFALL INTENSITY	10 YEAR RUNOFF	25 YEAR RUNOFF	100 YEAR RUNOFF
	AC	AC	AC	-	-	-	%	IN/HR	IN/HR	IN/HR	CFS	CFS	CFS
PRE-A	0.04	0.11	0.15	0.35	0.95	0.79	73.40	3.19	4.20	6.17	0.38	0.50	0.74
PRE-B	0.01	0.10	0.11	0.35	0.95	0.88	87.59	3.19	4.20	6.17	0.31	0.40	0.59
PRE-C	0.00	0.14	0.14	0.35	0.95	0.96	101.04	3.19	4.20	6.17	0.43	0.56	0.83
PRE-D	0.05	0.17	0.22	0.35	0.95	0.82	78.20	3.19	4.20	6.17	0.56	0.74	1.09
PRE-E	0.03	0.12	0.15	0.35	0.95	0.83	80.39	3.19	4.20	6.17	0.40	0.52	0.77
PRE-OFF-1	0.14	0.07	0.21	0.35	0.95	0.56	35.24	3.19	4.20	6.17	0.38	0.50	0.73
PRE-OFF-2	0.05	0.02	0.07	0.35	0.95	0.49	23.61	3.19	4.20	6.17	0.11	0.14	0.21
Total:	0.32	0.73	1.05							Total:	2.56	3.37	4.95





EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
- CONIFEROUS TREE
- FOUND MONUMENT
- SET MONUMENT
- ELECTRIC BOX
- ELECTRIC METER
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U.C.P.R.U.	UTAH COUNTY PUBLIC RECORDS, UTAH
TBM	TEMPORARY BENCHMARK
"X" CUT	"X" CUT IN CONCRETE
IRF	IRON ROD FOUND
CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

DRAINAGE DIRECTION

PRE DEVELOPMENT DRAINAGE AREA KEY:

PRE DEVELOPMENT ON-SITE DRAINAGE AREA

PRE DEVELOPMENT OFF-SITE DRAINAGE AREA

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TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH

891 N. MAIN ST.,
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PROJECT NO: JM-TFO21032
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PRE DEV DRAINAGE AREA MAP

C 500

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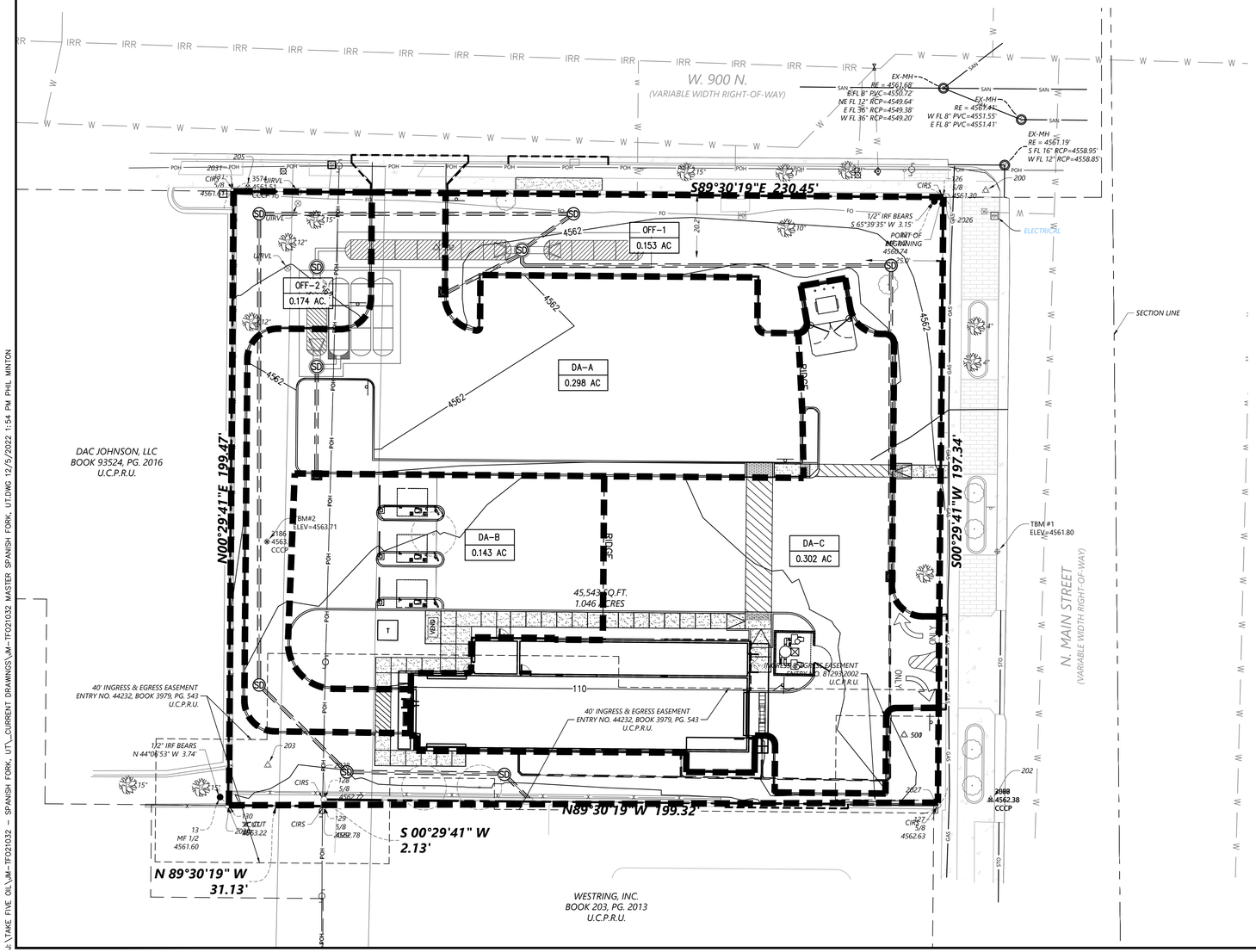
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DA-A	0.03	0.27	0.30	0.17	0.95	0.88	90.94	3.19	4.20	6.17	0.84	1.10	1.62
DA-B	0.02	0.12	0.13	0.13	0.95	0.86	88.72	3.19	4.20	6.17	0.36	0.48	0.70
DA-C	0.01	0.28	0.29	0.18	0.95	0.92	96.67	3.19	4.20	6.17	0.86	1.13	1.66
OFF-1	0.15	0.00	0.15	0.20	0.95	0.21	1.30	3.19	4.20	6.17	0.10	0.14	0.20
OFF-2	0.17	0.00	0.17	0.22	0.95	0.24	2.30	3.19	4.20	6.17	0.13	0.17	0.25
Total:	0.37	0.68	1.05							Total:	2.29	3.02	4.44



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1 inch = 20 ft.

EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
- CONIFEROUS TREE
- FOUND MONUMENT
- SET MONUMENT
- ELECTRIC BOX
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U.C.P.R.U.	UTAH COUNTY PUBLIC RECORDS, UTAH
TBM	TEMPORARY BENCHMARK
"X" CUT	"X" CUT IN CONCRETE
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CIRS	5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

- PROPOSED CURB & GUTTER
- LIMITS OF FULL DEPTH SAWCUT
- PROPOSED STORM DRAIN LINE
- STOP BAR STRIPING
- ACCESSIBLE SPACES
- ADA RAMP
- SIGN
- NYLOPLAST COMBINATION INLET
- NYLOPLAST MANHOLE
- NYLOPLAST GRATE INLET
- SAND/OIL INTERCEPTOR
- RECLAIM TANK
- CLEAN-OUT
- DOUBLE CLEAN-OUT
- GAS METER
- WATER METER
- IRRIGATION METER
- SANITARY SEWER MANHOLE
- SAMPLE PORT
- DRAINAGE DIRECTION
- DRAINAGE SLOPE AND DIRECTION

POST DEVELOPMENT DRAINAGE AREA KEY:

- POST DEVELOPMENT ON-SITE DRAINAGE AREA

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John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER — No. 10527678-2202 — JOHN T. MEASELS — STATE OF UTAH

12/05/22

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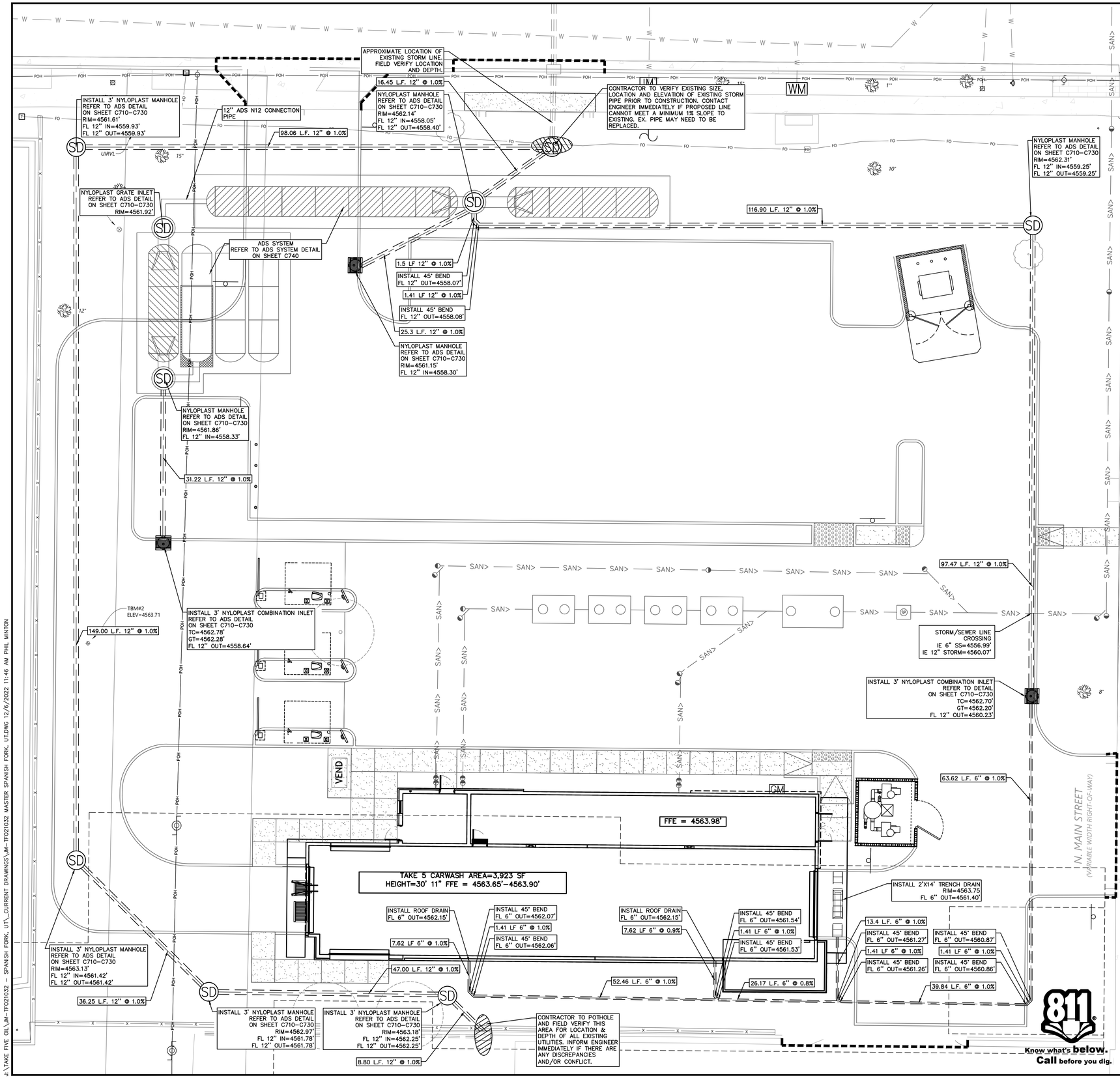
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PROJECT NO: JM-TFO21032
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POST DEV DRAINAGE AREA MAP

C 510

J:\TAKE FIVE OIL\JM-TFO21032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TFO21032 MASTER SPANISH FORK, UT.DWG 12/5/2022 1:54 PM PHIL MINTON



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PIPING MATERIAL SCHEDULE

STORM SEWER SMALLER THAN 12"	SDR-35 PVC PER ATSM D3034
STORM SEWER - 12" OR LARGER (PRIVATE)	DUAL WALLED HDPE, AASHTO M252 &M294
STORM SEWER - WITHIN PUBLIC EASEMENT OR RIGHT-OF-WAY.	RCP, C-76, CLASS III

ENGINEER'S NOTE:

1. POT HOLE PRIOR TO CONSTRUCTION TO IDENTIFY LOCATION AND DEPTH OF ALL UTILITIES IN THIS AREA. NOTIFY ENGINEER IMMEDIATELY IF THERE ARE ANY CONFLICTS AND/OR DISCREPANCIES.
2. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF PROPOSED STORM DRAIN INVERTS CANNOT BE MET WHILE TRENCHING.
3. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF THERE IS ANY DISCREPANCY FROM PROPOSED STORM DRAIN INVERTS AND CROSSINGS WHILE TRENCHING.
4. ALL PROPOSED UTILITIES WITHIN THE PROPERTY LINE OF THE SITE ARE TO BE CONSIDERED PROPOSED AND PRIVATE.

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 10 ft.

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- PROPOSED CURB & GUTTER
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- WM WATER METER
- IM IRRIGATION METER
- NYLOPLAST COMBINATION INLET
- SD NYLOPLAST MANHOLE
- NYLOPLAST GRATE INLET
- LIGHT POLE
- SS SANITARY SEWER MANHOLE
- SAMPLE PORT
- POTHOLE

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STORM DRAIN PLAN

C 520

J:\TAKE FIVE OIL\JM-TFO21032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TFO21032 MASTER SPANISH FORK, UT.DWG 12/6/2022 11:46 AM PHIL MINTON

SPANISH FORK
PRIDE & PROGRESS

TO: Community Development Department

FROM: Dave Anderson, AICP

DATE: December 21, 2022

RE: Proposed Landscape Requirements

Landmark Design has been working for the past several months to develop new landscape requirements for various situations and types of developments. This correspondence includes the proposed landscape requirements as well changes to related portions of the Municipal Code. Also, attached to this memorandum is a proposed Street and Shade Tree List and Residential Guidebook. While these materials are still in draft form, I believe they are very near being ready for adoption.

Several distinct factors led staff to believe a proposal of this nature was needed. Those factors include the following:

- long-lasting drought conditions;
- requests, most from businesses, to be allowed to install different landscaping than what the City currently requires;
- concerns about how deviating from the current requirements would lead to ugly/unmaintained sites in the City;
- efforts from other entities to encourage or mandate reductions in water use.

In my view, the highlights of the proposed changes include the following:

- they would create distinct processes and requirements for single-family homes on individual lots and other land uses;
- they would leave the requirements for single-family homes on individual lots nearly, if not entirely, the same as they are today.
- they would change the submittal and improvement requirements for non-residential and multi-family developments;
- landscaping plans and landscape improvements for non-residential and multi-family developments would be based on a maximum amount of water that a site would be allowed to use.

15.4.16 Design and Development Standards

15.4.16.010 Availability of Adequate Public Facilities

15.4.16.020 Unavailability of Adequate Public Facilities

15.4.16.030 Improvement Installations
15.4.16.040 Fees
15.4.16.050 Utility Connection
15.4.16.060 Sewage Facilities
15.4.16.070 Foundation Drains
15.4.16.080 Water Transfer
15.4.16.085 Street Improvements
15.4.16.090 Time Limitation for Completion
15.4.16.100 Conflict of Interest
15.4.16.110 Security for Improvements Required
15.4.16.120 Off Street Parking
15.4.16.130 Landscaping Regulations
15.4.16.140 Fencing and Clear Vision Area
15.4.16.150 Solid Waste Receptacle Areas
15.4.16.160 Site Reclamation
15.4.16.170 Hillside Development
15.4.16.180 Neighborhood Mailboxes

15.4.16.130 Landscape Regulations

A. Purpose
B. Requirements for Single-family and Twin Home Residential Uses
C. Requirements for New and Rehabilitated Developer/Contractor Installed Landscapes for Residential Subdivisions, Professional Office, Public, Commercial and Industrial Uses
D. Requirements for All Project Types
E. Plan Review, Construction Inspection and Post-Construction Monitoring
F. Links and References

A. Purpose

It is in the public interest to enhance, conserve, and stabilize property values by encouraging pleasant and attractive landscapes and surroundings, providing proper separations between uses, conserving public water resources and promoting water efficient landscapes. The purpose of this chapter is to protect and enhance the environmental, economic, recreational, and aesthetic resources in Spanish Fork by promoting attractive properties by establishing standards and practices for the design, installation and maintenance of water efficient landscapes throughout the City.

B. Landscape Requirements for Single-family and Twin Home Residential Uses

1. Application

   The landscape requirements that follow shall apply to all new and rehabilitated single-family and twin home residential landscapes. The following describes the general landscape design requirements for single-family and twin home residential uses.

a. All single-family residential lots shall have the front yard, side-street yards for corner lots and park strips landscaped within one (1) year of receiving a certificate of occupancy. Interior side and back yards must be landscaped within two (2) years of receiving a certificate of occupancy.
b. All portions of a lot that are not improved with impervious materials must be landscaped within the above-described timelines. Weeds do not qualify as required landscaping.
c. Required landscaping shall be comprised of live plant material with an automated irrigation system. Water-conserving designs are encouraged (see Section 15-C-2. Water-Conserving Landscape Design Requirements for Single-family and Twin Home Residential Uses below for details).
d. No more than 70% of a lot shall be surfaced with impervious materials. No more than 60% of the front and side-street setback areas can be improved with impervious surfaces.
e. In order to ensure landscaping requirements are met, Spanish Fork City shall require applicants to provide a deposit with the construction of new homes. The deposit amount shall be determined in the City budget and will be returned to the property owner when the required front and side-street yard landscape has been installed. In the event that the required landscaping has not been installed within four (4) years after the certificate of occupancy has been issued, the deposit will be forfeited to the City.

2. Water-Conserving Landscape Design Requirements and Recommendations for Single-family and Twin Home Residential Uses
   a. Water-conserving Landscape Design is Encouraged.
      The Localscapes® Program, the Salt Lake City Plant List and Hydrozone Schedule 2013 prepared by Salt Lake City Public Utilities, and the Utah State University Center for Water-efficient Landscaping, shall be primary references for the design and installation of water-conserving plants and landscapes in Spanish Fork City (see Spanish Fork Water-Conserving Landscape Online Resource List at www.spanishfork.org). These and other resources included in the list offer user-friendly design ideas, recommendations, programs, examples and inspiration for the implementation of water-conserving landscapes for single-family and twin home uses, as well as those for and developer/contractor installed projects.
   b. If size permits, the landscaped areas of the front yard, side and rear yards should follow Localscapes® five-step process as follows and as detailed in the Spanish Fork City Water-wise Landscape Design Elements & Principles Guidebook (2022) and the Localscapes® Program (see Spanish Fork Water-Conserving Landscape Online Resource List at www.spanishfork.org).
      i. Create a central open space in the front and rear yards consisting of lawn, hardscape, groundcover, gravel or compacted mulch.
      ii. Create smaller gathering areas constructed of hardscape shall be placed outside of the central open shape. In a landscape without lawn, gathering areas may function as the central open shape.
      iii. Fill remaining areas with planting beds composed of water-conserving plants and water-efficient irrigation systems.
      iv. Locate activity zones outside of the central open shape that are surfaced with materials other than lawn.

v. Provide paths and walkways to link the different areas of the yard together. These should be constructed of hardscape, mulch, other groundcover or non-lawn materials.

C. Landscape Requirements for New and Rehabilitated Developer/Contractor Installed Landscapes for Residential Subdivisions, Professional Office, Commercial and Industrial uses

1. The following standards shall be required for all new and rehabilitated developer and contractor installed landscapes for the following project types:
   a. Multi-family residential uses and developer-installed landscapes for single-family subdivisions;
   b. Professional Office and Non-residential or Non-commercial uses;
   c. Commercial uses; and
   d. Industrial uses.
2. The standards do not apply to single-family, twin home and similar residential uses (see Section C. General Landscape Requirements for Single-family and Twin Home Residential Uses).
3. The standards are not intended to conflict with other landscape requirements as defined by Utah law, including stormwater retention requirements and low-impact development guidelines. Notwithstanding these outdoor standards, whenever any requirement may conflict with Utah law, such conflicting requirements shall not apply.
4. No more than 30% of the required landscaping shall be irrigated turf grass. At maturity, all applicable landscapes are required to have enough plant material (perennials, decorative grasses, shrubs, groundcovers and similar) to create at least 50% living plant cover at maturity at the ground plane, not including tree canopies.
5. General design requirements, the following describes the general landscape design requirements for each type of use.
   a. Multi-family Residential Uses
      i. Minimum of 25% on-site landscapes as a percentage of total site area, except in the R-5 Zone where 20% on-site landscaping is required.
      ii. Parking lots shall include landscape islands within the parking lot, with a minimum of 108 square feet of planter area for every 10 parking spaces. Required landscape islands shall encompass individual islands of landscaping and shall be at least six (6) feet wide. Required planter areas shall include Shade Trees, as identified on the City's approved Street and Shade Tree List (Appendix X), with a maximum spacing of 30 feet (see Section 12.08 Street Trees and Park Strip Design).
      iii. Minimum 15-foot-wide planting area adjacent to all public streets, which shall include trees with a maximum spacing of 30 feet. The planting areas may be partially or completely within the street right-of-way area. The specific trees used shall be selected from the City's approved Street and Shade Tree List (Appendix X). On streets included in the Shade Tree Master Plan, the trees selected shall include the mix of trees as prescribed by the Plan. Street and Shade trees must be planted within 30 feet of the public street curb, and wherever possible, 50% of the required Street and Shade Trees must be planted in the park strip.

iv. A minimum 10-foot-wide planting buffer and a six (6) foot wall is required where any multi-family use abuts another property. An exception to the six (6) foot wall requirement may be granted if the Development Review Committee finds that the multi-family use and adjacent uses are designed to create an integrated campus-like environment. In such cases the planter area shall include shade trees are spaced a maximum of 30 feet apart.

In cases where it is determined that the tree species in the approved Street and Shade Tree List (see Appendix X) would adversely impact utility lines and public infrastructure, the use of substitute tree species may be approved by the Community Development Director

v. No more than 30% of the required landscaping shall be irrigated turf grass. At maturity, multi-family and non-residential landscapes are required to have enough plant material (perennials and shrubs) to create at least 50% living plant cover at maturity at the ground plane, not including tree canopies.

b. Professional Office and Non-residential or Non-commercial Uses
   i. Minimum of 20% on-site landscaping as a percentage of total site area.
   ii. Parking lots shall include landscape islands within the parking lot, with a minimum of 108 square feet of planter area for every 10 parking spaces. Required landscape islands shall be individual islands of landscaping and shall be at least six (6) feet wide. Required planter areas shall include Street and Shade Trees, as identified on the City's approved Street and Shade Tree List (Appendix X), with a maximum spacing of 30 feet (see Section 12.08 Street Trees and Park Strip Design for details).
   iii. Minimum 15-foot-wide planting area adjacent to all public streets, which shall include trees with a maximum spacing of 30 feet. The planter area may be partially or completely within the street right-of-way area. The specific trees used shall be selected from the City's approved Street and Shade Tree List (Appendix X). In locations included in the Shade Tree Master Plan, the selected trees shall include the mix of trees as prescribed by the Plan. Street and Shade Trees must be planted within 30 feet of the public street curb wherever possible, with 50% of the required Street and Shade Trees required to be planted in the park strip.
   iv. A minimum 10-foot-wide planting buffer is required where the site abuts a residential use or district. The planting buffer shall include trees with a maximum spacing of 30 feet. A six (6) foot wall shall be constructed where the site abuts a residential district. Where the use of the adjacent property is residential but zoned Commercial Office, Commercial 1, Commercial 2, Commercial Downtown, Urban Village Commercial, Business Park or Shopping Center, a solid fence (not chain link with slats or similar) may be constructed in place of the wall. In situations where adjacent sites are designed to function as an integrated campus, the Development Review Committee may consider alternatives to the six (6) foot wall.
   v. In cases where it is determined that utilizing tree species found in the approved Street and Shade Tree List (Appendix X) would adversely impact utility lines, the use of substitute tree species may be approved by the Community Development Director.

No more than 30% of the required landscaping shall be irrigated turf grass. At maturity, multi-family and non-residential landscapes are required to have enough plant material (perennials and shrubs) to create at least 50% living plant cover at maturity at the ground plane, not including tree canopies.

c. Commercial Uses
    i. Minimum of 15% on-site landscaping as a percentage of total site area.
    ii. Parking lots shall include landscape islands within the parking lot, with a minimum of 108 square feet of planter area for every 10 parking spaces. Required landscape islands shall be individual islands of landscaping and shall be at least six (6) feet wide. Required landscape islands shall include Shade Trees as identified on the City's approved list of Street and Shade Trees, with a maximum spacing of 30 feet.
    iii. Minimum of 15-foot-wide planter area adjacent to all public streets, which shall include one Street Tree for each 30 feet of frontage along all public streets. The specific trees used shall be selected from the City's approved Street and Shade Tree List (Appendix X). For sites included in the Shade Tree Master Plan, the trees selected shall include the mix of trees as prescribed by the Plan. Street and Shade Trees must be planted within 30 feet of the public street curb, and wherever possible 50% of the required Street and Shade Trees must be planted in the park strip.
    iv. A minimum 10-foot-wide planting buffer where the site abuts a residential use or district. The planting buffer shall include trees with a maximum spacing of 30 feet. A six (6) foot high wall shall be constructed where the site abuts a residential district. Where the use of the adjacent property is residential but zoned Commercial Office, Commercial 1, Commercial 2, Commercial Downtown, Urban Village Commercial, Business Park or Shopping Center, a solid Fence (not chain link with slats or similar) may be constructed in place of the Wall. Also, in situations where adjacent sites are designed to function as an integrated campus, the Development Review Committee may consider alternatives to the six (6) foot high wall.
    v. In cases where it is determined that utilizing tree species found in the approved Street and Shade Tree List (Appendix X) would adversely impact utility lines, the use of substitute tree species may be approved by the Community Development Director.
    vi. In order to ensure landscape requirements are met and City utilities are not damaged, Spanish Fork City shall require applicants to provide a deposit with the construction of each non-residential project valued at $50,000 or more. The deposit amount shall be determined in the City budget and will be refunded to whomever paid the application fees containing that line item. If the required landscape cannot be installed prior to the issuance of the Certificate of Occupancy, a landscaping bond will be required for the estimated cost of installing the required landscape. Once the landscaping is complete and approved, the landscaping bond will be refunded to whomever paid it.
    vii. No more than 30% of the required landscaping shall be irrigated turf grass. At maturity, multi-family and non-residential landscapes are required to have enough plant material (perennials and shrubs) to create at least 50% living plant cover at maturity at the ground plane, not including tree canopies.

ci. Industrial Uses

i. Minimum of 10% on-site landscaping as a percentage of total site area.
ii. Parking lots shall include landscape islands within the parking lot, with a minimum of 108 square feet of planter area for every 10 parking spaces. Required landscape islands areas shall be individual islands of landscaping and shall be at least six (6) feet wide. Required planting areas shall include Street and Shade Trees, as identified on the City's approved list of Street and Shade Trees, with a maximum spacing of 30 feet. The planter area may be partially or completely within the street right-of-way area.
iii. A minimum 15-foot-wide planting area shall be located adjacent to all public streets, which shall include trees with a maximum spacing of 30 feet. The specific trees used shall be selected from the City's approved Street and Shade Tree List (Appendix X). On streets included in the Street and Shade Tree Master Plan, the selected trees shall include the mix of trees as prescribed by the Plan. Street and Shade Trees must be planted within 30 feet of the public street curb and, wherever possible, 50% of the required Street and Shade Trees must be planted in the park strip.
iv. A minimum of 10-foot-wide planting area and six (6) foot high wall are required where a site abuts a residential use or district. The planter area shall include trees with a maximum spacing of 30 feet.
v. In cases where it is determined that utilizing tree species found in the approved Street and Shade Tree List (Appendix X) would adversely impact utility lines, the use of substitute tree species can be approved by the Community Development Director.
vi. No more than 30% of the required landscaping shall be irrigated turf grass. At maturity, multi-family and non-residential landscapes are required to have enough plant material (perennials and shrubs) to create at least 50% living plant cover at maturity at the ground plane, not including tree canopies.

6. Water-Conserving Landscape Design Requirements for New and Rehabilitated Developer/Contractor Installed Landscaping for Residential Subdivisions, Professional Office, Public, Commercial and Industrial uses
   a. General Water-conserving Design Considerations
      i. Plants selected for landscape areas shall be well-suited to the microclimate and soil conditions at the project site. Plants with similar water needs shall be grouped together as much as possible.
      ii. Areas with slopes greater than twenty five percent (25%) shall be landscaped with deep-rooting, water-conserving plants for erosion control and soil stabilization. No turf grasses or overhead irrigation is allowed on slopes greater than 25%.
      iii. Exemptions. Sports fields, turf play areas within public parks, school grounds, golf courses and cemeteries may be deemed exempt from the landscape water allowance limitations of this chapter with approval by the Community Development Director. All other portions of this chapter shall apply.
      iv. Mulch. After the completion of planting, all irrigated non-turf areas shall be covered with a minimum three-inch (3") to four-inch (4") layer of mulch to retain water, inhibit weed growth, and moderate soil temperature. Nonporous material shall not be placed under the mulch. Drip irrigation is required where turf grasses are not being utilized.

v. Soil Preparation. Soil preparation will be suitable to provide healthy growing conditions for the plants and to encourage water infiltration and penetration. Soil preparation shall include scarifying the soil to a minimum depth of six inches (6") and amending the soil with organic material as per recommendations of the landscape designer/ landscape architect based on the required soils report.

b. Plant Selection

The Localscapes® Program, the Salt Lake City Plant List and Hydrozone Schedule 2013 prepared by Salt Lake City Public Utilities, and the Utah State University Center for Water-efficient Landscaping shall be primary references for the design and installation of water-conserving plants and landscapes in Spanish Fork City (see Spanish Fork Water-Conserving Landscape Online Resource List at (add web/reference link).

c. Documentation

i. Landscape Plan Documentation Package

A copy of a landscape plan documentation package shall be submitted to and approved by the City prior to issuance of any permit. The landscape plan documentation package shall be prepared by a professional landscape architect. The irrigation plan shall be prepared by an irrigation designer certified by the Irrigation Association and/or a professional landscape architect.

ii. The landscape plan documentation package shall consist of the following items. A sample documentation set is provided in Appendix X.

a. Project Data Sheet. The project data sheet shall contain:

- project name and address;
- applicant or applicant agent's name, address, phone and fax number;
- landscape architects name, address, phone and fax number; and
- landscape contractor's name, address, phone.

b. Planting Plan: A detailed planting plan shall be drawn at an appropriate scale suitable for identifying the location of all plant materials.

c. Irrigation Plan: A detailed irrigation plan shall be drawn at the same scale as the planting plan and shall contain:

- layout of the irrigation system;
- a legend summarizing the type and size of all components of the system, including manufacturer name and model numbers;
- static water pressure in pounds per square inch (psi) at the point of connection to the public water supply;
- flow rate in gallons per minute and design operating pressure in psi for each valve and precipitation rate in inches per hour for each valve with sprinklers; and;
- installation details for irrigation components;
- inclusion of a WaterSense labeled smart irrigation controller which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions. All controllers shall be equipped with automatic rain delay or rain shut-off capabilities.

d. Grading Plan: A grading plan shall be drawn at the same scale as the planting plan and shall contain:
   - property lines and street names, existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements, and
   - existing and finished contour lines and spot elevations for the proposed site improvements.

e. Soils Report: A soils report will be provided describing the depth, composition, and bulk density of the topsoil and subsoil at the site, in addition to recommendations for soil amendments. The planting plan shall incorporate the recommendations of the soils report into the planting specifications.

f. Landscape Water Allowance: The Maximum Applied Water Allowance shall be calculated using the following equation: MAWA = (ETo) (0.62)(1.15)[(0.8 x LA) + (0.3 x SLA)], where:
   - MAWA = Maximum Applied Water Allowance (gallons per year);
   - ETo = Reference Evapotranspiration (inches per year) as calculated from weather data at the closest available weather station. The ETO in the Spanish Fork region is 24.68;
   - 0.62 = Conversion Factor (to gallons);
   - 1.15= Delivery Inefficiency Factor (sprinkler system uniformity etc.);
   - 0.8 = ET Adjustment Factor (ETAF), plant factor or crop coefficient (.8 standard for cool season turf) LA = Landscape Area including SLA (square feet);
   - 0.3 = Additional Water Allowance for SLA. SLA = Special Landscape Area (square feet).

g. Irrigation Schedule: A monthly irrigation schedule shall be provided that covers the initial 120-day plant establishment period adjusted for seasonal variations. This schedule shall consist of a table with the following information for each valve:
   - plant type (turf, trees, low water use plants);
   - irrigation type (sprinklers, drip, bubblers);
   - flow rate in gallons per minute;
   - precipitation rate in inches per hour (sprinklers only);
   - run times in minutes per day;
   - number of water days per week; and
   - cycle time to avoid runoff.

E. Landscape Requirements for all Project Types

1. General Requirements
   a. All irrigation systems shall be appropriate for the designated plant material to achieve the highest water efficiency. Drip irrigation and bubbler systems shall be used in all landscape are except those that contain lawn. Drip irrigation systems shall be equipped with a pressure regulator, filter, flush-end assembly, and any other appropriate components.
   b. Each irrigation valve shall irrigate landscaping with similar site, slope and soil conditions, and plant materials with similar watering needs. Lawn and planting beds shall be irrigated

on separate irrigation valves. In addition, drip emitters and sprinklers shall be placed on separate irrigation valves.

c. At least 3-4 inches of mulch, permeable to air and water, shall be used in planting beds to control weeds and improve the appearance of the landscaping.
d. At maturity, single-family landscapes are recommended to have enough plant material (perennials and shrubs) to create at least 50% living plant cover at maturity at the ground plane, not including tree canopies.
e. At maturity, multi-family and non-residential landscapes are required to have enough plant material (perennials and shrubs) to create at least 50% living plant cover at maturity at the ground plane, not including tree canopies.
f. Lawn should not be installed in park strips, paths, or on slopes greater than 25% or 4:1 grade.

2. Trees
   a. Purpose

      The planting and growth of healthy trees contribute to making Spanish Fork an attractive and healthy community. Planting the correct type of tree in the right setting is an important factor for ensuring Spanish Fork will continue to be an attractive and resilient city in the future. Landscape design and implementation practices are therefore required to ensure existing trees are preserved to the greatest degree possible, and that newly planted trees survive and thrive. This is particularly important for street trees and trees located in the highly-visible front yards of all properties in the city. The purpose of this section is to define permitted and prohibited trees for use in Spanish Fork and to identify the standards that apply to the selection and planting of correct trees in different locations.

   b. Tree Selection and Standards

      Planting the right type of tree in the correct setting is an important factor for ensuring that Spanish Fork will continue to be an attractive and resilient city in the future. This is a function of the specific location where the tree is planted, and the size of the soil/planting area, as described below and detailed in the Spanish Fork Approved Street and Shade Tree List (Appendix X). In addition to those requirements, tree restrictions may be subject to requirements of other government agencies (UDOT, for example) and utilities with below and above-ground electrical, gas and cable services. In order to accomplish this, the following standards and practices shall be required.

      i. Selection and planting of street trees contained in the Spanish Fork Approved Street and Shade Tree List (Appendix X).
      ii. Existing trees should be preserved whenever possible.
      iii. When removing vegetation and plantings around the trunks and bases of existing trees when installing water efficient landscapes, special care should be taken to not damage the roots of existing trees.
      iv. Newly planted trees will need additional water during the first years of planting in order to become established. In addition to properly designed irrigation systems, other methods such as drip hoses and “gator bags” should be used to provide more water for new trees.

v. Street trees shall be selected based on a combination of their approximate size at maturity, Tree Size at maturity as follow:
   - Large Trees – 45 feet tall or greater at maturity;
   - Medium Trees – 30 to 45 feet tall at maturity;
   - Small Trees – Less than 30 feet tall at maturity.

vi. Nursery Stock Specifications - trees should be grown in a recognized nursery in accordance with good horticultural practice (American Association of Nurseryman Standards, ANSI Z60.1, as amended, or similar). Trees should be healthy, vigorous stock grown under climatic conditions similar to the locality of the project and free of disease, insects, eggs, larvae, and defects such as knots, sun-scale, injuries, abrasions, or disfigurement.

vii. Minimum Tree Size: the minimum size of all deciduous trees shall be 2-inch caliper minimum, measured as provided in the American Association of Nurseryman Standards, ANSI Z60.1, as amended, or similar. Evergreen trees shall be not less than six (6) feet in height, measured from ground level, unless approved in writing by the Community Development Director.

viii. Permitted Trees - General
   - Large Planting Areas: Select from the Large Tree List. Planting area width shall be a minimum of 10 feet wide, which is generally sufficient to accommodate large trees with maximum size, shade and energy conservation benefits, while providing space for root and branch growth that will not conflict with site features;
   - Medium Planting Areas: Select from the Medium Tree List. Planting area width shall be at least 5 to 10 feet, which is generally sufficient to accommodate size trees while providing space for root and branch growth that will not conflict with site features;
   - Small Planting Areas: Select trees from the Small Tree List. Planting area width shall be no smaller than 4 feet, which is considered the absolute minimum space necessary to accommodate small size trees.

c. Prohibited Tree List
   i. See Prohibited Tree List (Appendix X).

d. Street Trees and Park Strip Design
   i. See Spanish Fork Approved Street and Shade Tree List (Appendix X) and other requirements.
   ii. Park strips shall be designed as part of the adjacent use and landscape treatment.

3. Other Standards, Requirements and Maintenance Considerations

a. Use of Artificial Turf as a Ground Cover Not Permitted
   Artificial turf is a lawn substitute composed of individual artificial blades of grass that attempt to emulate natural turf in look and color. The use of artificial turf in park strips, front yards and side yards that are visible from the street does not meet the goals of creating an attractive and livable city and are not permitted.

b. Zero-scape Not Permitted
   Zero-scape is a landscape design method that eliminates the need for irrigation water by eliminating plants from the landscape. Zero-scape landscapes are typified by yards and

landscape areas covered with pavement, other paving and hardscape materials, gravel, rock and stone. Zero-scape landscapes treatments in park strips, front yards and side yards that are visible from the street do not meet the goals of creating an attractive and livable city and are not permitted in Spanish Fork City.

c. large shrubs at maturity shall be five (5) gallons when planted. All smaller shrubs, perennials and decorative grasses shall be a minimum of one (1) gallon size when planted.
d. larger shrubs at maturity shall be five (5) gallons when planted. All smaller shrubs, perennials and decorative grasses shall be a minimum of one (1) gallon size when planted.
e. Planting areas shall be separated from parking areas and driveways by a raised six (6) inch concrete curb.
f. Landscaped areas shall be maintained in a neat, clean, and orderly condition. This includes the removal of litter, proper pruning, lawn mowing, weeding, dead-heading of perennial plants, fertilizing, replacement of dead plants, and regular watering of all landscaped areas.
g. The Community Development Director may waive, at their discretion, the size requirements for required landscaping provided that the developer provides financial assurance that the landscaping will survive or be replaced after the first two growing seasons. Trees and bushes shall be replaced after the first two (2) growing seasons if they die or fail to reach the minimum required size by October 15 of the second year after the landscaping was installed and inspected by the City.

G. Plan Review, Construction Inspection and Post-Construction Monitoring

1. As part of the site plan or subdivision application, a copy of the required landscape plan documentation package shall be submitted to the city for review and approval before a permit shall be issued and construction begins .
2. All landscape plan documentation packages submitted must be stamped by a professionally licensed landscape architect (PLA). The irrigation plan must be prepared by and stamped by an IA certified irrigation designer or PLA.
3. All landscape irrigation systems should be installed by an IA certified irrigation contractor. The certified person representing the contracting firm shall be directly involved with the project and complete and document at least weekly site visits.
4. All installers, designers and auditors shall meet State and local license, insurance, and bonding requirements, and be able to show proof of such.
5. During construction, site inspection may be performed by the Community Development Department.
6. A guarantee of the installation of landscaping as approved shall be made to the City in the same manner as that required for any other required improvement by including in a bond, escrow or letter of credit, the estimated cost of the landscaping work at the time of building permit issuance, or is deemed satisfactory by the Planning Commission for all small developments, by means of a financial guarantee for landscaping remaining uncompleted at the time of application for final building inspection and power to panel and/or occupancy permit. Such financial guarantee shall specify the maximum length of time for completion of the remaining landscaping.

7. In order to ensure landscaping requirements are met and City utilities are not damaged, Spanish Fork City shall require applicants to provide a deposit with the construction of each non-residential project valued at $50,000 or more. The deposit amount shall be determined in the City budget and will be refunded to whomever paid the application fees containing that line item. If the required landscaping cannot be installed prior to the issuance of the Certificate of Occupancy, a landscaping bond will be required for the estimated cost of installing the required landscaping. Once the landscaping is complete and approved, the landscaping bond will be refunded to whomever paid it.
8. Spanish Fork City reserves the right to perform site inspections at any time before, during or after the irrigation system and landscape installation, and to require corrective measures if requirements of this chapter are not satisfied.

H. Links and References

See add reference or link for a comprehensive matrix and list of specific and relevant online websites, reports and references that to support this chapter of the Zoning Ordinance.

15.4.16.140 Fencing and Clear Vision Area

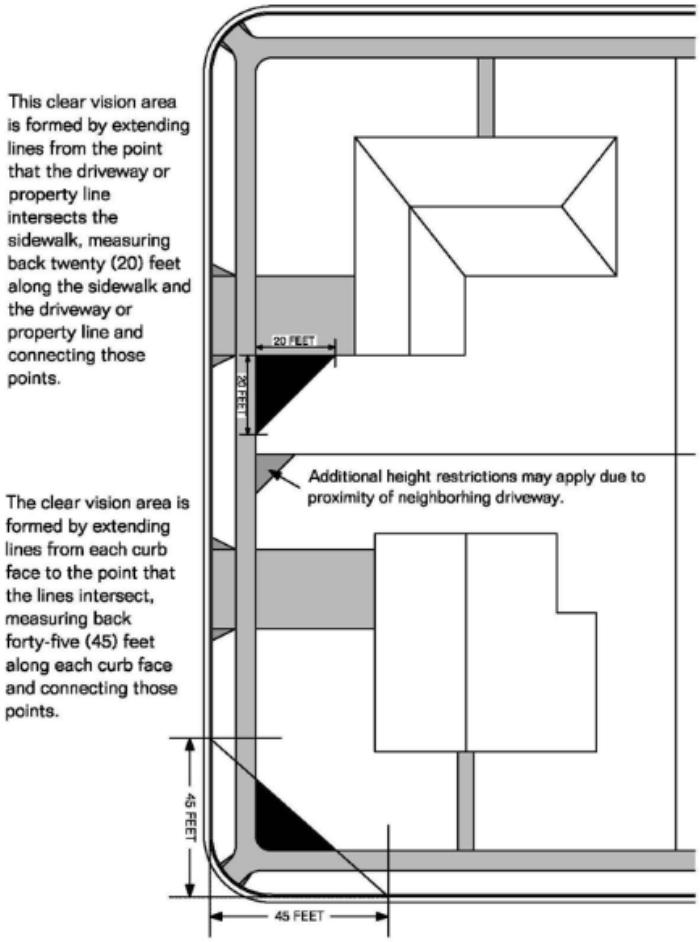
A. General Fencing Requirements

1. A Building Permit is required for all fences that are taller than three (3) feet. No fee is charged for Fence Permits unless the Permit is required by the Building Code.
2. The maximum height of a fence is six (6) feet in all zoning districts; fence pillars are not to exceed six and one-half (6 1/2) feet in height. The Council may waive the height requirement at its sole discretion.
3. The maximum height of a solid fence within the front yard setback area is three (3) feet. Substantially open fences such as chain link, or wrought iron may be four (4) feet high.
    a. A residential lot with over two hundred (200) feet of frontage and that is a minimum of twenty thousand (20,000) square feet in areas, may obtain permission from the Community Development Director to locate a solid six (6) foot tall fence within a front yard. The fence must maintain a minimum setback of ten (10) feet from the front property line.
    b. A fence located within the front yard setback shall not be located in front of the residence, but must be to the sides of the residence. Clear vision requirements shall still apply.
    c. No more than fifty (50) percent of the lot frontage shall have said fencing within the front yard setback.
    d. The area between said fencing and the property line shall be landscaped within one (1) year of installing said fencing.
4. Barbed wire fencing is allowed in A-E, R-R, I-1 and I-2 districts.
5. Razor wire and other similar type fencing are allowed in C-2, I-1 and I-2 districts when located above a height of six (6) feet, subject to DRC approval. Additional screening of any such fence with plant materials may be required.
6. Fences must be built with a minimum setback of three (3) feet around the following utilities: fire hydrants, water meters (culinary and irrigation), telephone pedestals, power boxes and cable boxes.

B. Restrictions for Clear Vision Area

1. The clear vision area is formed by extending lines from each curb face to the point that the lines intersect, measuring back 45 feet along each curb face and connecting those points. Fencing, planting and other obstacles are restricted within this area as follows:
    a. No solid fence shall exceed a height of three (3) feet, measured from the curb. Open fences such as chain link and wrought iron may be as tall as four (4) feet in the clear vision area, measured from the curb.
    b. Trees in park strips shall be pruned to maintain a clear area below 14 feet in height.
    c. Trees on private property must be pruned to maintain a clear area below eight (8) feet in height.
    e. Other site obscuring obstacles of that are three (3) feet or taller may not be placed in the clear vision area.
2. A second clear vision area is also required at each driveway or where the rear of a corner lot adjoins an interior lot's driveway. This clear vision area is formed by extending lines from the point that the driveway or property line intersects the sidewalk, measuring back 20 feet along

the sidewalk and the driveway or property line and connecting those points. The same restrictions for landscaping, fencing and obstacles apply in this area.



15.4.16.150 Solid Waste Receptacle Areas

Multi-family dwellings, and non-residential uses shall provide solid waste receptacle areas screened on three (3) sides with a masonry wall having a height at least one (1) foot above any receptacle or container. A steel site-obscuring gate at least six (6) feet in height is required. This requirement may be waived or modified by the DRC when it is determined that a “roll-out” residential style container is sufficient for the type of operation proposed, or, the screen wall requirement may be waived when solid waste receptacle areas are sufficiently screened or otherwise located within the project to not be visible by or adversely impact adjoining properties.

12.08 Street Trees and Park Strip Design

A. Intent
B. Applicability
C. Park Strip Design
D. Permitted Trees in Park Strips
E. Street Tree Requirements
F. Shade Tree Commission
G. Violations

A. Intent

To establish consistent and appropriate planting of trees and plant materials within public street rights-of-way to create a verdant and attractive tree canopy, provide environmental benefit and establish a unified sense of identity for all new streets.

B. Applicability

The requirements herein apply to all new development requiring regulating plan approval.

C. Park Strip Design

1. See Section 15.4.16.130 Landscape Regulations for landscape submittal and design requirements.
2. The design and treatment of all park strips associated with any property or project shall be addressed as part of the overall landscape design of the associated property.

D. Permitted Trees in Park Strips

1. See the Spanish Fork approved Street and Shade Tree List (Appendix X) for street trees permitted in park strips. Note that the selection of trees should be based on the size of the trees (small, medium and large) as determined by the width of the park strip.
2. All other trees are prohibited in the park strip.
    a. Street Tree Selection and Standards

    Planting the right type of tree in the correct setting is an important factor for ensuring that Spanish Fork City will continue to be an attractive and resilient city in the future. This is a function of the specific location where the tree is planted, and the size of the soil/planting area, as described below and detailed in the Spanish Fork Approved Street and Shade Tree List (Appendix X). In addition to those requirements, tree restrictions may be subject to requirements of other government agencies (UDOT, for example) and utilities with below and above-ground electrical, gas and cable services. In order to accomplish this, the following standards and practices shall be required.

    i. Limit the selection of street trees to the lists contained in the Spanish Fork Approved Street and Shade Tree List (Appendix X).
    ii. Existing trees should be preserved whenever possible.
    iii. When removing vegetation and plantings around the trunks and bases of existing trees when installing water efficient landscapes, special care should be taken to not damage the roots of existing trees.
    iv. Newly planted trees will need additional water during the first years of planting in order to become established. In addition to properly designed irrigation systems, other

methods such as drip hoses and “gator bags” should be used to provide more water for new trees.

v. Street trees shall be selected based on a combination of their approximate size at maturity, Tree Size at maturity as follow:
   - Large Trees – 45 feet tall or greater at maturity;
   - Medium Trees – 30 to 45 feet tall at maturity ;
   - Small Trees – Less than 30 feet tall at maturity.

vi. Nursery Stock Specifications - trees should be grown in a recognized nursery in accordance with good horticultural practice (American Association of Nurseryman Standards, ANSI Z60.1, as amended, or similar). Trees should be healthy, vigorous stock grown under climatic conditions similar to the locality of the project and free of disease, insects, eggs, larvae, and defects such as knots, sun-scale, injuries, abrasions, or disfigurement.

vii. Minimum Tree Size: the minimum size of all deciduous trees shall be 2-inch caliper minimum, measured as provided in the American Association of Nurseryman Standards, ANSI Z60.1, as amended, or similar. Evergreen trees shall be not less than six (6) feet in height, measured from ground level, unless approved in writing by the Community Development Director.

viii. Permitted Trees - General
   - Large Park Strips: Select from the Large Tree List. Planting area width shall be a minimum of 10 feet wide, which is generally sufficient to accommodate large trees with maximum size, shade and energy conservation benefits, while providing space for root and branch growth that will not conflict with site features;
   - Medium Park Strips: Select from the Medium Tree List. Planting area width shall be at least 5 to 10 feet, which is generally sufficient to accommodate size trees while providing space for root and branch growth that will not conflict with site features;
   - Small Park Strips: Select trees from the Small Tree List. Planting area width shall be no smaller than 4 feet, which is considered the absolute minimum space necessary to accommodate small size trees.

E. Street Tree Requirements

1. No tree may be planted within thirty feet (30’) of intersecting sidewalk corners.
2. No tree may be planted within ten feet of any water meter, electric meter, junction box, transformer, other electrical facility, or utility pole.
3. Only small trees should be planted in any area where the potential exists that limbs may grow into power or phone lines. Trees which interfere with public utilities will be trimmed at the owner's expense.
4. Clear Branch Height: Minimum clear branch height is eight feet (8').
5. Street Tree Spacing: Street trees shall be planted as follows:
   a. Number: each lot is required to have one tree for every thirty feet (30') of street frontage with a minimum of one street tree per street frontage.
   b. Spacing: Large Trees must be spaced a minimum of thirty (30) and a maximum of sixty feet (60') on center.

c. Medium Trees must be spaced a minimum of twenty (20) and a maximum of thirty feet (30') on center.
d. Placement: no trees may be planted closer to any curb or sidewalk than as follows unless a permeable surface is provided:
    i. Small and Medium Trees: three feet (3');
    ii. Large Trees: four feet (4').
e. Limited distance between curb and sidewalk: Where the distance from the back of the curb to the edge of the right-of-way or property line is less than nine feet (9') with a sidewalk, applicant shall work with the City staff to determine the appropriate tree species.
f. City Manager or designee may waive the street tree requirement in park strips less than six feet (6').

6. Tree wells and grates: In commercial districts, where the sidewalk extends from the back of curb to the property line, tree wells shall be utilized.
7. For tree wells adjacent to sidewalks five feet (5') in width or less, an open pit is not permitted. The opening must be covered with a tree grate or pervious pavement.
8. The opening in a tree grate for the trunk must be expandable.

F. Shade Tree Commission

(Ord. No. 16-98, Enacted, 12/01/1998) (Ord. 05-07, Repealed 12.08.030, February 20, 2007)

G. Violations

Any person violating 12.08.010 or 12.08.020 of this chapter shall be guilty of a Class C Misdemeanor. Removal of the offending tree shall be grounds for dismissal of any charges. (Ord. No. 16-98, Enacted, 12/01/1998)

15.1.04.020 Definitions

"Activity Zones": a Localscapes® design principle that establishes specific areas of the home landscape for recreation or similar functions such as storage areas, fire pits, vegetable gardens and play areas (see Localscapes®).
"Active Recreation Areas": areas of the landscape such as parks, sports fields and play areas dedicated to active play, where lawn is an appropriate landscape surface.
Artificial Turf: A ground cover or surface consisting of synthetic fibers made to look like natural grass.
"Central Open Space": a Localscapes® design principle that establishes specific areas of the home landscape as unobstructed focal point and a primary use area.
"Certified Irrigation Designer": a person certified by the Irrigation Association to prepare irrigation system designs, and/or a Professionally Licensed Landscape Architect (PLA) in the State of Utah.
"Drought Tolerant Plant": a plant that can survive without irrigation for limited periods of time. The application of supplemental irrigation water may be desirable during extended drought periods for improved appearance, disease resistance and survival rates (see Non-Drought Tolerant Plant).
"Evapotranspiration": the quantity of water evaporated from adjacent soil surfaces and transpired by plants during a specific time, expressed in inches per day, month or year.
"Evapotranspiration Rate (ETo)": the amount of water lost from a cropped surface during the growing season as expressed in inches. For the purposes of this ordinance, ETo reflects the 30-year average for the Spanish Fork area during the 8-month growing season March through October, which is 24.68.
"Gathering Areas": a Localscapes® design principle that establishes specific areas of the home landscape as patios, gazebos, arbors, decks, and similar spaces suitable for congregating and gathering.
"Ground Cover": material planted in such a way as to form a continuous cover over the ground that can be maintained at a height not more than twelve inches (12").
"Hardscape": durable and generally hard landscape materials such as concrete, wood, pavers, stone and compacted crushed stone.
"Irrigated Landscape Area": all portions of a development site to be improved with planting and irrigation. Natural open space areas shall not be included in the irrigated landscaped area.
Landscape Irrigation Auditor:(LIA): A person certified by the Irrigation Association to conduct a landscape irrigation audit.
"Landscape Water Allowance": for design purposes this is the upper limit of annual applied water for the established landscaped area. It is based upon the local reference evapotranspiration rate, the ETo adjustment factor and the size of the landscaped area.
"Lawn": ground that is covered with grass or turf that is regularly mowed and irrigated (see Turf).
"Localscapes®": a water-conserving design approach developed by Utah horticulturists, landscape architects, landscape experts, irrigation experts and members of the water industry that simplifies water-conserving design into a five-step process that is easy to implement by non-professionals and appropriate for use in Utah. Localscapes® is supported by the Spanish Fork City and is particularly appropriate for single-family and similar residential, twin home and similar yards and landscapes (see Water-conserving Landscape, Water-wise Landscape and Xeriscape).
"Mulch": any material such as bark, wood chips, crushed stone, chat or similar materials left loose and applied to the soil for the purpose of preventing evapotranspiration.

"Park Strip": a typically narrow landscaped area located between the back-of-curb and sidewalk or fence line in cases where no sidewalk exists. The application of water-conserving landscape treatments are generally encouraged in such locations.
"Paths and Walkways": a Localscapes® design principle that establishes specific areas of the home landscape as routes that link other landscape areas and features.
"Planting Bed": a Localscapes® design principle that establishes portions of the home landscape for the planting of regionally-appropriate and water-conserving plants, trees, shrubs, perennials, ornamental grasses and groundcovers.
"Turf": ground that is covered with grass or lawn that is regularly mowed (see Lawn).
"Water-conserving Landscape": see Water-wise Landscape and Xeriscape.
"Water-conserving Plant": a plant that uses less water than standard plants.
"Water-wise Landscape": (see Localscapes®, Water-conserving Landscape and Xeriscape)
"Xeriscape": a type of landscape design that reduces the need for water. Xeriscape is also known as Water-conserving and Water-wise landscape design that is permitted and encouraged in Spanish Fork City. Localscapes® is a type of xeriscape design (see Localscapes®, Water-conserving Landscape and Water-wise Landscape).
"Zero-scape": a type of landscape design that eliminates the need for irrigation water by eliminating plants from the landscape and utilization of gravel, rock and stone in place of plants (see Localscapes®, Water-conserving Landscape, Water-wise Landscape and Xeriscape).

attachments: Street and Shade Tree List
Residential Guidebook

LIST A - SMALL STREET AND SHADE TREES

COMMON NAME	BOTANICAL NAME	ACCEPTABLE CULTIVARS	"MATURE HEIGHT"	"CANOPY SPREAD"	USDA HARDINESS ZONE	SALT TOLERANCE	DROUGHT TOLERANCE	POOR DRAINAGE TOLERANCE	ALKALINITY TOLERANCE	SHAPE	FLOWERS	FRUIT	FALL COLOR	ADDITIONAL NOTES
Maple, Trident	Acer buergerianum	Streetwise	20-30' +	15-25'	5	high	high	low	medium	oval/round	small green-yellow in spring, insignificant	green samaras	orange-red	slow growing
Maple, Tatarian*	Acer tataricum	"Hot Wings, Pattern Perfect, Rugged Charm"	20-25' +	15-20'	3	medium	high	medium	high	oval to round	white clusters in spring	red samaras	yellow-red	showy seeds
Maple, Shantung	Acer truncatum	"Pacific Sunset, Norweigan Sunset,"	20-30' +	20-30'	4	medium	medium	medium	medium	rounded to oval	pale yellow insignificant	samaras	"yellow, orange, red, purple"	heat tolerant
Maple, Shantung	Acer truncatum	Ruby Sunset	20-25' +	18-20'	4	medium	medium	medium	medium	"broad oval to round"	pale yellow insignificant	samaras	deep red	heat tolerant, glossy green leaves
Netleaf Hackberry *	Celtis reticulata		20-25' +	20-25'	3	medium	high	medium	high	"rounded spreading"	"green in spring, insignificant"	orange-red	yellow	very tolerant to adverse growing conditions
Eastern Redbud *	Cercis canadensis		15-25' +	20-30'	4	low	high	low	high	irregular	pink/purple before leaves	"small, brown pod 2-3"" long "	yellow	tolerant of partial shade, vibrant in the spring
Fringetree, Chinese *	Chionanthus retusus		20-25'	20-25'	5	low	low	low	high	broadly oval	large green-white clusters in spring, fragrant	1/2" - 1" blue-purple fruit	yellow	light brown exfoliating young bark
Fringetree *	"Chionanthus virginicus"		20-25'	20-25'	3	medium	medium	high	medium	spreading oval	green-white in spring, fragrant	1/2" - 3/4" blue-black fruit	yellow	stunning when in full bloom
Hawthorn *	Crataegus laevigata	Pauls Scarlet, Crimson Cloud	20-25' +	15-20'	4	medium	medium	medium	high	broad round	double rose red	red edible	no fall color	vibrant in the spring
Hawthorn, Winter King *	Crataegus viridis	Winter King	20-30' +	20-30'	4	medium	high	medium	high	wide vase	white in spring, showy	"bright red edible"	purplish red	tolerant of urban pollution
Hawthorn, Lavalle *	Crataegus x lavalleli	Lavelle	20-30' +	15-20'	4	medium	high	medium	high	dense oval	white in spring	red edible	coppery red	lustrous green leaves, persistent fruit
"Hawthorn, Thornless Cockspur *"	Cratageus crus-galli	Thornless Cockspur	20-30' +	20-35'	3	medium	high	medium	high	rounded spreading	white in spring	red edible	orange-scarlet	persistent fruit in to winter, thornless
Maackia	Maackia amurensis		20-30' +	15-20'	3	medium	medium	medium	high	rounded vase	white fragrant in summer	flat see pods	yellow	tolerant of urban conditions
Flowering Crabapple *	Malus sp.	"Spring Snow, Snow Drift, Sargent, Zumi"	15-25' +	15-25'	4	high	medium	medium	high	rounded to oval	varies with cultivar	"fruit varies with cultivar"	yellow	fruitless or persistent fruit only, showy in spring

LIST A - SMALL STREET AND SHADE TREES

COMMON NAME	BOTANICAL NAME	ACCEPTABLE CULTIVARS	"MATURE HEIGHT"	"CANOPY SPREAD"	USDA HARDINESS ZONE	SALT TOLERANCE	DROUGHT TOLERANCE	POOR DRAINAGE TOLERANCE	ALKALINITY TOLERANCE	SHAPE	FLOWERS	FRUIT	FALL COLOR	ADDITIONAL NOTES
Parrotia	Parrotia persica	Vanessa	20-30'	15-20'	4	medium	high	medium	high	upright vase	insignificant	insignificant	yellow-orange-red	slow growing
Flowering Cherry, Kwanzan	Prunus serrulata	Kwanzan	20-25' +	15-20'	5	medium	medium	low	medium	vase shaped	double deep pink	"sterile flowers do not produce fruit"	yellow	blossoms are showy in the spring
"Flowering Cherry, Akebono *"	Prunus x yedoensis	Akebono	20-25' +	20-25'	5	medium	medium	low	medium	spreading	double, light pink	black purple	yellow	blossoms are showy in the spring
Flowering Pear, Korean Sun	Pyrus fauriei	Korean Sun, Westwood	10-15' +	15-Oct	4	medium	medium	moderate	high	compact rounded	white in spring	"yellow green small"	red-purple	better branch attachment than most flowering pears
Flowering Pear, Jack	Pyrus calleryana	Jaczam Jack	15-20' +	10-12'	5	medium	high	medium	high	compact oval	white	"yellow green small"	yellow	ideal under utility lines
Flowering Pear, Prairie Gem	Pyrus ussuriensis	Prairie Gem, MorDak	20-25' +	20-25	3	medium	high	medium	high	oval to rounded	white	"yellow green small"	yellow	hardy flowering pear cultivar
Lilac, Peking Lilac *	Syringa pekinensis	China Snow, Summer Charm	20-25' +	15-20'	3	medium	medium	low	high	rounded	"creamy white fragrant dense clusters"	dry capsules	yellow	attractive exfoliating, amber colored bark
Lilac, Japanese Tree Lilac *	Syringa reticulata	Ivory Silk	20-25' +	15-20'	3	low	medium	medium	high	"upright oval/ rounded"	"creamy white fragrant dense clusters"	dry capsules	yellow	tolerant of urban conditions
Linden, Summer Sprite	Tilia cordata	Summer Sprite Linden	18-20' +	12-15'	3	low	medium	medium	high	dense pyramidal	tiny yellow fragrant in spring	"gray nutlets with bracts"	yellow	perfect for confined urban spaces
Zelkova, City Sprite *	Zelkova serrata	City Sprite	20-24' +	15-18'	5	medium	high	low	medium	"compact oval to vase"	insignificant	insignificant	yellow	perfect for confined urban spaces
Zelkova, Wireless *	Zelkova serrata	Wireless	20-24' +	30-35'	5	medium	high	low	medium	"flat topped broad spreading"	insignificant	insignificant	reddish orange	ideal under utility lines, better in 5' parkstrips

Notes:
All parkstrip trees must be a single trunk form unless approved by Community Development Director.
Other tree species may be appropriate with approval from the Community Development Director.

* Proven Performer
+ Trees to be planted under utility lines

References:
The Morton Arboretum http://www.mortonarb.org/trees-plants/search-trees/search- all-trees-and-plants
Missouri Botanical Gardens http://www.missouribotanicalgarden.org/plantfinder/plantf
Utah State University Cooperative Extension Tree Browser https://treebrowser.org
Cornell Woody Plants Database http://woodyplants.cals.cornell.edu/home
J. Frank Schmidt https://www.jfschmidt.com/indtroductions

LIST B - MEDIUM STREET AND SHADE TREES

COMMON NAME	BOTANICAL NAME	ACCEPTABLE CULTIVARS	"MATURE HEIGHT"	"CANOPY SPREAD"	USDA HARDINESS ZONE	SALT TOLERANCE	DROUGHT TOLERANCE	POOR DRAINAGE TOLERANCE	ALKALINITY TOLERANCE	SHAPE	FLOWERS	FRUIT	FALL COLOR	ADDITIONAL NOTES
Maple, Hedge	Acer campestre	Metro Gold, Queen Elizabeth	25-35'	25-35'	5	high	medium	medium	high	"oval/round dense"	small, green-yellow in spring, insignificant	green samaras	yellow	doesn't tend to get leaf scorch
Maple, State Street	Acer miyabei	State Street, Rugged Ridge	30-45'	30-35'	4	low	high	medium	high	"oval to rounded"	small, green-yellow in springs, insignificant	green samaras	yellow-orange	hardy, tough, pest free maple
Euorpean Alder	Alnus glutinosa		40-50	20-40'	3	low	medium	high	medium	pyramidal	drooping male catkins	"small woody cones"	none	tolerates a wide range of soils
Hornbeam, Fastigate	Carpinus betulus 'Fastigiata'	Fastigiata	30-40'	20-30	4	low	medium	medium	medium	oval vase	catkins	clusters of small nutlets in bracts	yellow-orange	smoth gray bark with fluting
Yellowood *	Cladrastis kentukea	American, Perkins Pink	30-50'	30-50'	4	medium	medium	medium	high	round	"large hanging fragrant white or pink flowers"	flat papery pod	yellow	very showy flowers in late spring, smooth gray bark
Turkish Filbert	Corylus colurna		40-50'	15-35'	4	low	medium	medium	high	pyramidal	insignificant	edible nut		tolerant tree once estabilshed
Hardy Rubber Tree	Eucommia ulmoides	Emerald Point	35-40'	15-20'	4	medium	high	high	high	narrow oval	insignificant	winged seed	none	"tolerates a wide range of soil conditions, glossy green leaves"
Ginkgo *	Ginkgo biloba	"Autumn Gold, Princeton Sentry, Magyar, Colonade"	40-45'	15-30'	4	medium	high	medium	high	pyramidal	insignificant	fruitless	yellow-golden	"tolerant of a wide range of soil conditions, adapts well to urban environments"
Honeylocust *	Gleditsia triacanthos inermis	"Street Keeper, Skyline, Shademaster, Northern Acclaim, Sunburst, Perfection"	35-50'	20-40'	3	high	high	high	high	pyramidal to round dependent on cultivar	insignificant yet smell very sweet	reported as fruitless	golden yellow	small fine leaves give filtered shade
Goldenrain *	Koelreuteria paniculata		30-40'	30-40'	5	high	high	medium	high	round	"very showy bright yellow flowers in upright clusters"	"black seed in papery capsule"	yellow-orange	tough adaptable tree
"Osage Orange, White Shield"	Maclura pomifera	White Shield, Wichita	30-25'	30-35'	4	medium	high	medium	high	"upright spreading"	none	none	yellow	tough tolerant, thornless, fruitless

LIST B - MEDIUM STREET AND SHADE TREES

COMMON NAME	BOTANICAL NAME	ACCEPTABLE CULTIVARS	"MATURE HEIGHT"	"CANOPY SPREAD"	USDA HARDINESS ZONE	SALT TOLERANCE	DROUGHT TOLERANCE	POOR DRAINAGE TOLERANCE	ALKALINITY TOLERANCE	SHAPE	FLOWERS	FRUIT	FALL COLOR	ADDITIONAL NOTES
Mulberry, Fruitless	Morus alba	Fruitless Mulberry	30-50'	30-50'	4	high	high	high	high	"wide spreading"	small yellowish green	fruitless	none	tough tolerant tree
Hophornbeam	Ostrya virginiana	Autumn Treasure, Sun Beam	25-40'	20-30'	3	medium	medium	low	high	"oval to rounded"	brown-green in summer	hop-like sac	yellow	"mature smooth gray bark exfoliates to reveal orange inner bark"
Amur Corktree *	Phellodendron amurense	Macho, Eye Stopper, His Majesty	30-45'	30-60'	3	medium	high	medium	high	rounded broad spreading	non showy yellow-green	pea sized black	yellow	once established very tolerant to urban conditions
Mayday Tree	Prunus padus	Merlot	30-40'	18-30'	3	medium	medium	low	medium	"pyramidal to round"	showy white pendulous	pea sized black	yellow	showy in spring
Flowering Pear	Pyrus calleryana	Aristocrat, Autumn Blaze, Capital,Chanticleer, Trinity	30-40'	12-28'	5	medium	high	medium	high	upright to pyramidal	white in spring	small fruit	redish	good fall color
Littleleaf Linden	Tilia cordata	Greenspire	40'	35'	3	low	medium	medium	high	pyramidal	pale yellow in spring	nutlet	yellow	flowers are fragrant
Linden, Crimean	Tilia x euchlora		40-50	20-30'	3	low	medium	medium	high	"rounded pyramidal"	fragrant creamy yellow	"gray nutlets with bracts"	yellow	reported to have more resistance to aphids
Elm, Emerald Flair	Ulmus parvifolia	Emerald Flair	40-45'	30-35'	4	medium	high	medium	high	spreading vase	insignificant	"flat round samara"	red-orange red	has better red fall color than most cultivars
Elm, Emerald Sunshine	Ulmus propinqua	Emerald Sunshine	30-35'	20-25	5	uknown	high	unknown	unknown	vase	inconspicuous	"small, flat, papery"	yellow	tolerant of all urban conditions
Elm, Frontier *	"Ulmus. carpinifolia and U. parvifolia."	Frontier	30-40'	20-30'	4	medium	high	medium	high	upright, vase	inconspicuous	"small, flat, papery"	"burgandy-purplish"	tolerant of all urban conditions

Notes:
All parkstrip trees must be a single trunk form unless approved by Community Development Director.
Other tree species may be appropriate with approval from the Community Development Director.

* Proven Performer
+ Trees to be planted under utility lines

References:
The Morton Arboretum http://www.mortonarb.org/trees-plants/search-trees/search- all-trees-and-plants
Missouri Botanical Gardens http://www.missouribotanicalgarden.org/plantfinder/plantf
Utah State University Cooperative Extension Tree Browser https://treebrowser.org
Cornell Woody Plants Database http://woodyplants.cals.cornell.edu/home
J. Frank Schmidt https://www.jfschmidt.com/indtroductions

LIST C - LARGE STREET AND SHADE TREES

COMMON NAME	BOTANICAL NAME	ACCEPTABLE CULTIVARS	"MATURE HEIGHT"	"CANOPY SPREAD"	USDA HARDINESS ZONE	SALT TOLERANCE	DROUGHT TOLERANCE	POOR DRAINAGE TOLERANCE	ALKALINITY TOLERANCE	SHAPE	FLOWERS	FRUIT	FALL COLOR	ADDITIONAL NOTES
Black Maple	Acer nigrum		60-75'	40-50'	4	medium	high	low	high	oval to rounded	green-yellow in spring, insignificant	Green samaras	"yellow-orange-red"	"similar to sugar maple but more heat and drought tolerant"
Maple, Sycamore	Acer pseudoplatanus		40-55'	35-55'	4	high	high	medium	high	round	small green-yellow in spring, insignificant	green samaras	yellow	Gray flaking bark
Hornbeam	Carpinus betulus	"Emerald Avenue, Frans Fontaine"	40-60'	15-40'	4	low	medium	medium	medium	"narrow fastigate to broadly pyramidal"	insignificant	"nutlets in papery bracts"	yellow	very symmetrically shaped
Catalpa *	Catalpa speciosa		50-70'	20-50'	4	medium	high	medium	high	irregular open	white with spots inside	long slender	yellow	beautiful when in flower
Hackberry *	Celtis occidentalis	Chicagoland	40-60'	40-60'	3	medium	high	medium	high	rounded spreading	insignificant	purple drupe	pale yellow	tolerates both wet and dry conditions
Honeylocust *	Gleditsia triacanthos inermis	"Street Keeper, Skyline, Northern Acclaim"	40-45'	20-35'	3	high	high	high	high	pyramidal to round	insignificant yet smell very sweet	reported as fruitless	golden yellow	small fine leaves give filtered shade
Kentucky Coffee *	Gymnocladus dioicus	"Expresso, Prairie Titan, Stately Manor"	60-80'	40-45'	3	medium	high	medium	high	irregular open	"Greenish white, female are fragrant"	seedless	yellow	leaves drop early in the fall
Tulip Tree	Liriodendron tulipifera		60-70'	30-50'	4	low	medium	medium	medium	broad conical	yellow with orange bands	"dry brown oblong"	golden yellow	flowers somewhat hidden by leaves
Oak, English *	Quercus robur		50-70'	50-70'	5	high	medium	medium	high	broad rounded	insignificant	acorn	none	tolerant of alkaline soils
Oak, Chinkapin	Quercus muehlenbergii	Red Autumn	40-60'	50-60'	5	low	high	medium	high	oval to rounded	insignificant	acorn	"yellow brown or red"	tolerant of alkaline soils
Oak, Shumard	Quercus shumardii		40-60'	30-40'	5	medium	high	medium	high	oval	insignificant	acorn	brownish red	does well in wet and dry soil
Japanese Pagoda Tree	Sophora japonica	Halka Millstone	45'	35'	4	medium	medium	medium	high	rounded to oval	white	seeds pods	green-yellow	tolerates many soil sypes and conditions, seed pods can be messy
Linden, Silver *	Tilia tomentosa	"Sterling Silver, Green Mountain, Satin Shadow"	50-70'	25-40'	4	medium	medium	medium	high	pyramidal	fragrant creamy yellow	"gray nutlets with bracts"	yellow	best heat and drought tolerant of all lindens

LIST C - LARGE STREET AND SHADE TREES

COMMON NAME	BOTANICAL NAME	ACCEPTABLE CULTIVARS	"MATURE HEIGHT"	"CANOPY SPREAD"	USDA HARDINESS ZONE	SALT TOLERANCE	DROUGHT TOLERANCE	POOR DRAINAGE TOLERANCE	ALKALINITY TOLERANCE	SHAPE	FLOWERS	FRUIT	FALL COLOR	ADDITIONAL NOTES
Elm, Commendation *	"Ulmus (japonica x wilsoniana Morton) x (pumila x carpinifolia)"	Commendation	50-70'	40-50'	4	high	high	high	high	pyramidal	insignificant	flat round samara	yellow	fast growing but not wild
Elm, Green stone *	Ulmus davidianna 'JFS KW2UD'	Greenstone	50-60'	40-50'	4	unknown	unknown	unknown	unknown	upright vase	insignificant	"flat round samara"	yellow	strong branch attachments at open angles
Elm, New Horizon *	"Ulmus japonica × pumila 'New Horizon' "	New Horizon	50-55'	30-40'	3	high	medium	med	high	upright oval	insignificant	"flat round samara"	yellow	proven rugged street tree
Elm, Accolade *	"Ulmus japonica × wilsoniana 'Morton' "	Accolade	50-60'	30-40'	5	medium	high	low	high	arching vase	insignificant	"flat round samara"	yellow	excellent DED resistance
Elm, Triumph *	"Ulmus wilsoniana, U. japonica, and U. pumila"	Triumph	50-60'	40-45'	4	medium	high	high	high	upright oval to vase	insignificant	"flat round samara"	yellow	very dark green glossy leaves
Zelkova *	Zelkova serrata	Village Green, Green Vase	40-55'	30-50'	5	medium	high	low	medium	vase	insignificant	"small wingless drupe"	rusty red	"mature smooth gray bark exfoliates to reveal orange inner bark"

Notes:
All parkstrip trees must be a single trunk form unless approved by Community Development Director.
Other tree species may be appropriate with approval from the Community Development Director.

* Proven Performer
+ Trees to be planted under utility lines

References:
The Morton Arboretum http://www.mortonarb.org/trees-plants/search-trees/search- all-trees-and-plants
Missouri Botanical Gardens http://www.missouribotanicalgarden.org/plantfinder/plantf
Utah State University Cooperative Extension Tree Browser https://treebrowser.org
Cornell Woody Plants Database http://woodyplants.cals.cornell.edu/home
J. Frank Schmidt https://www.jfschmidt.com/indtroductions

LIST D - PROHIBITED TREES		
COMMON NAME	BOTANICAL NAME	ADDITIONAL NOTES
American Elm	Ulmus americana	Exceptions are provided for species and cultivars that are resistant to Dutch Elm disease, such as 'Frontier', 'New Harmony' and 'New Horizon' cultivars.
Birch	Betula sp.	
Box Elder	Acer negundo	Exception provided for Acer negundo 'Sensation', an improved cultivar with characteristics that may be suitable for street trees in particular.
Russian Olive	Elagnus angustifolia	
Siberian Elm	Ulmus pumilla	
Silver Maple	Acer saccharinum	
Tree of Heaven	Alianthus	
Blue Spruce	Picea sp.	

Notes:
Other tree species may be be prohibited at the discretion of the Community Development Director.

For questions regarding the Spanish Fork City Approved Street and Shade Trees Lists, please contact:

DAVE ANDERSON

COMMUNITY AND ECONOMIC DEVELOPMENT DIRECTOR

C 801.804.4586

DANDERSON@SPANISHFORK.ORG

40 S MAIN ST

SF, UT 84660

SPANISHFORK.ORG







SPANISH FORK
PRIDE & PROGRESS

RESIDENTIAL GUIDEBOOK

WATER-WISE LANDSCAPE DESIGN
ELEMENTS & PRINCIPLES

Date XX, XXXX

A Letter From Mayor Mendenhall

Dear Spanish Fork Residents,

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Sincerely,

Mayor Mike Mendenhal



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Introduction

WHY CONSERVE WATER?

Today, Utah is among the fastest growing and driest states in the nation. By the year 2065 the population is expected to double — increasing demand for and stretching finite water resources even further. The current drought is at a level unseen for many years and in some areas the drought is at, or near historic levels. Water conservation is an issue that touches everyone and ensuring that residents have enough water for the future is a major concern for Spanish Fork City's decision makers, water providers, local leadership, and the public.

A 2018 survey conducted by the Utah Department of Natural Resources identified education and information as the foremost barriers to water conservation in Utah and sustainability as the most important reason to conserve. While water conservation will not solve all the problems of water supply and demand, it can help bridge the gap and establish sustainable practices consistent with Utah's climate and fast-growing population.[1]

Water-Wise Landscapes

In Utah, outdoor residential water use is the largest single category of municipal water use averaging 45% of statewide municipal use. Of our culinary water use, approximately 65% is applied, often inefficiently, to landscapes.[2] The types of plants we grow, the density at which they are planted, and the type of system used to irrigate them can all have a major effect on the amount of water needed outdoors. Implementing more water-wise landscapes is one way we can help to conserve water now and for future generations.

A water-wise landscape is functional, attractive, easily maintained in its natural surroundings, and helps to conserve water. Efficient use of water in community landscapes reduces water waste and enhances the community's environmental, economic, recreational, and aesthetic resources. Other benefits include better functionality, less maintenance, enhanced curb appeal, lower water bills, simpler irrigation, and phased installation.[3]

Landscape Design Simplified

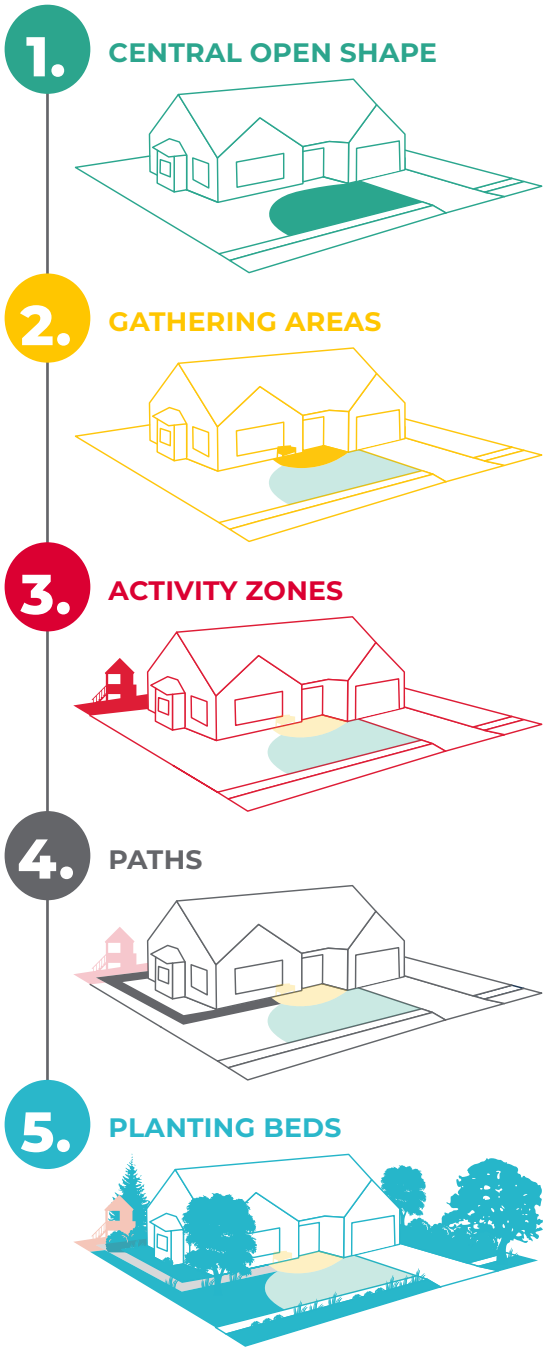
WHO IS THIS GUIDEBOOK FOR?

The water conservation mindset begins with individual water users and while this guidebook is targeted towards single family home owners, it is meant to provide a foundation for anyone seeking to transform their landscape into a water conserving one. It is important to note that **Spanish Fork City does not require single family home owners to install water-wise landscapes**. Rather, the concepts and principles described here are meant to provide guidance, inspiration, and encouragement. Multi-family, commercial, and industrial uses are required to implement water-conserving landscapes (see Spanish Fork's Landscaping Regulations in City Code 15.4.16.130).

THE LOCALSCAPES APPROACH

Implementing a water-wise landscape begins by utilizing designs and practices that take into account Utah's unique climate. Localscapes is a program that offers a simplified, practical approach to creating water-conserving landscapes and yards and the first section of this guidebook was adapted from the Localscapes Introductory Guide. What follows are five simple steps for transforming your yard into a practical, water-wise landscape.

This approach can be customized to fit any yard size, shape, or location and can be scaled to meet any budget. If renovating an entire yard isn't feasible, try starting small by installing one segment at a time or by focusing on a park strip or side yard. Remember, the Localscapes Approach is meant to be customizable to meet your needs and should be used in companion with principles of water-wise landscaping (see page 11).



1. Central Open Shape

- ☑ **Creates a focal point**
- ☑ **A simple, practical shape**
- ☑ **Often flat**



A central open shape creates a focal point that makes your landscape appear organized and well maintained. It allows sprinklers to work more efficiently by not forcing them to water oddly-shaped or inefficient lawn areas. The central open space can be made of materials such as turfgrass, ground cover, gravel, pavement, pavers, or any low-lying relatively flat material.

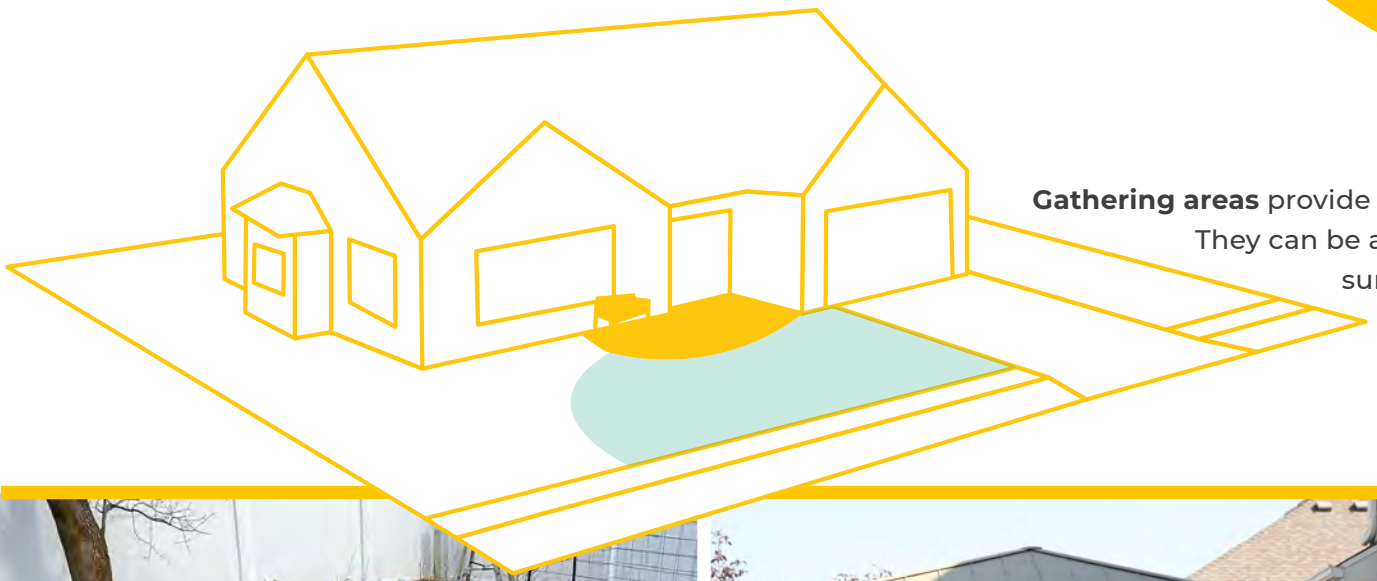




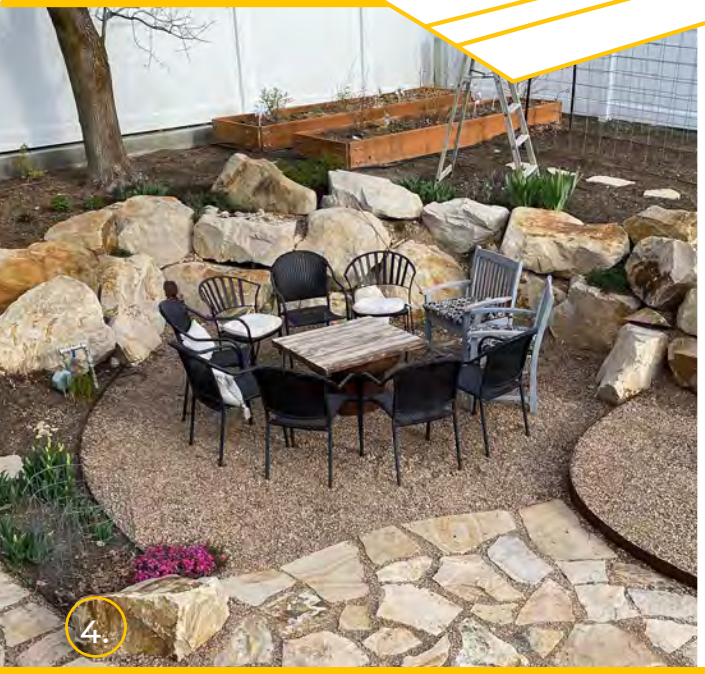


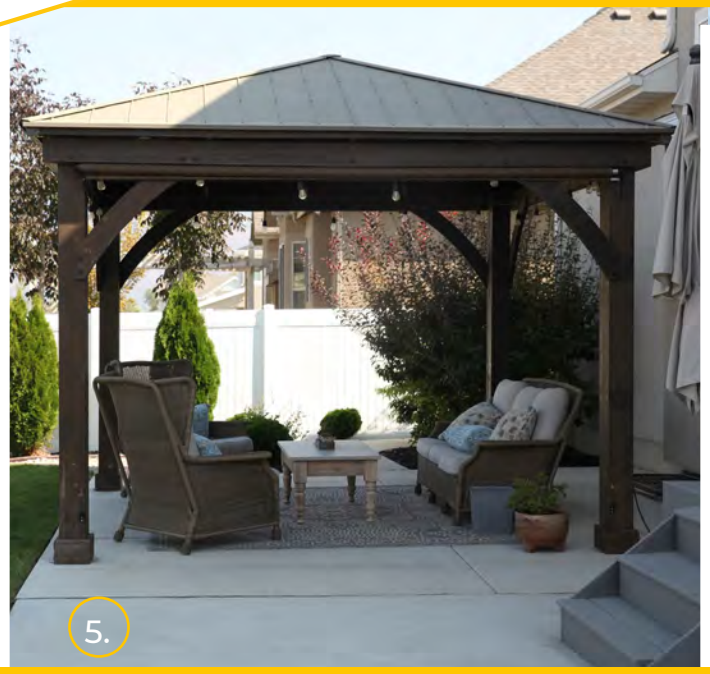
2. Gathering Areas

- ☑ **Areas to passively enjoy your yard**
- ☑ **Any size or shape**
- ☑ **Often include hardscape elements (patios, seating areas, courtyards, and decks)**
- ☑ **No lawn, plants, or water required**
- ☑ **Low maintenance**



Gathering areas provide opportunities to passively enjoy your yard. They can be any size or shape and are great for fire pits, sun decks, gazebos, and sitting areas.


4.


5.


6.

3. Activity Zones

- ☑ **Areas with dedicated uses**
- ☑ **Increase yard functionality while decreasing yard work**
- ☑ **No lawn**



Activity zones are dedicated areas without lawn surfacing. Examples include vegetable gardens, horseshoe pits, sheds, sports courts, hot tubs, and playsets.


7.


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- ☑ **Used to connect and explore your yard**
- ☑ **No lawn**

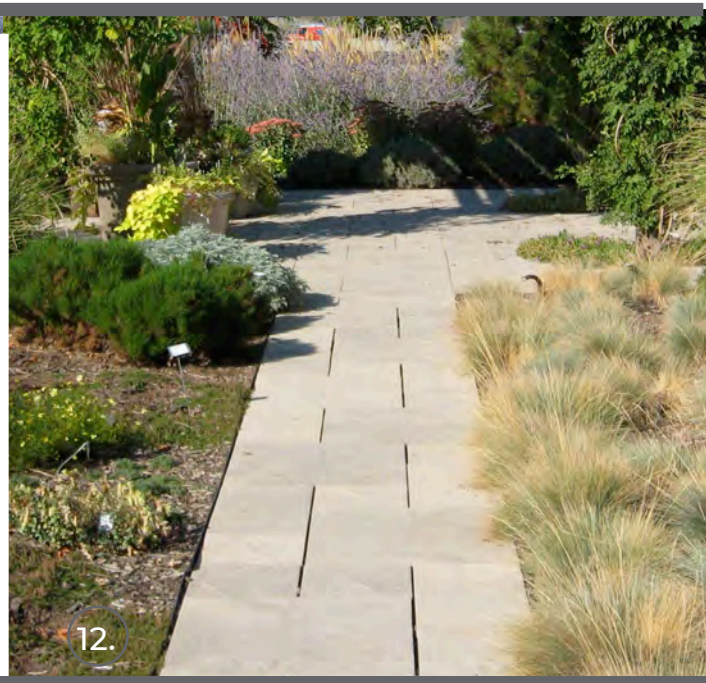
4. Paths



Paths connect the different areas of your yard and, when appropriate materials are used, can reduce maintenance. Options for path materials include concrete, stone, pavers, flagstone, compacted crushed stone, and similar materials. Turfgrass paths should be avoided since narrow lawn strips are difficult to irrigate and maintain (see Practical Turf Areas on page 12).

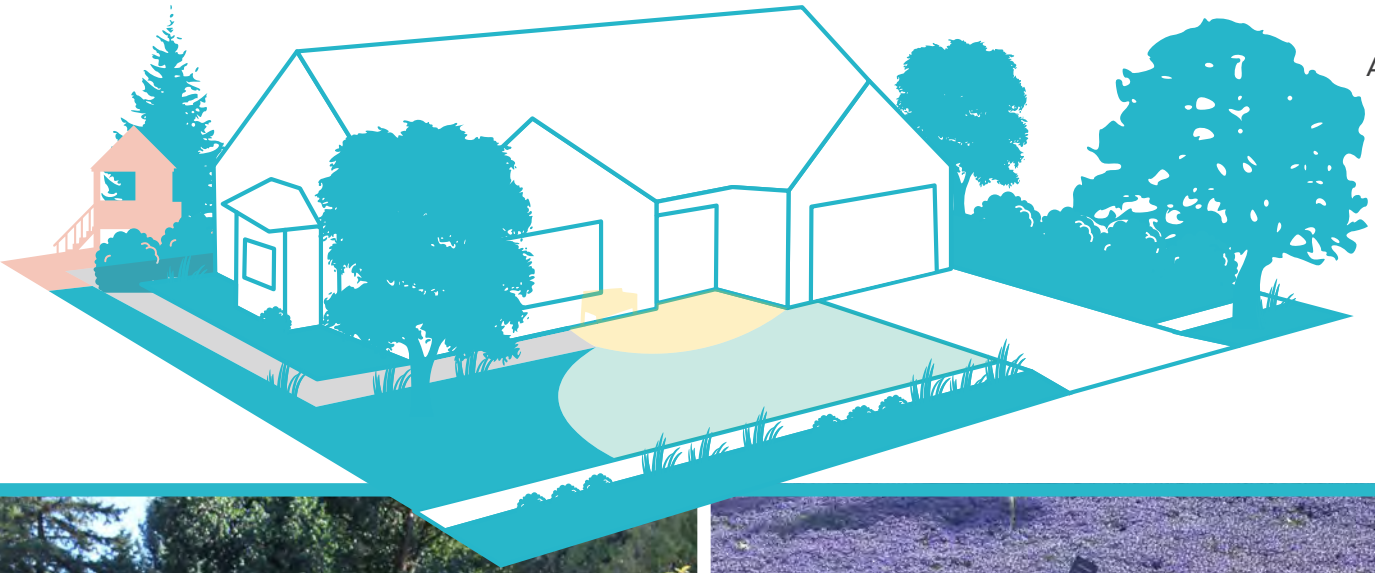

10.


11.


12.

5. Planting Beds

- ☑ **Fills and completes remaining areas**
- ☑ **Should be Utah-friendly, properly located, and watered efficiently**



After a plan is made for the central open shape, gathering areas, activity zones, and paths, **planting beds** composed of water-conserving plants and water-efficient irrigation systems are used to fill the remaining areas.


13.


14.


15.

Principles of Water-Wise Landscaping

An effective water-wise landscape design requires the application of water-conserving principles such as grouping plants with similar water requirements together or applying mulch around plants to retain moisture.

The following section describes seven water-wise principles from the Utah State University Extensions Center for Water-Efficient Landscaping which are meant to support and complement the Localscape design elements. As we design, install, and manage our yards and landscapes, it is critical to utilize the following principles of water-wise landscaping.

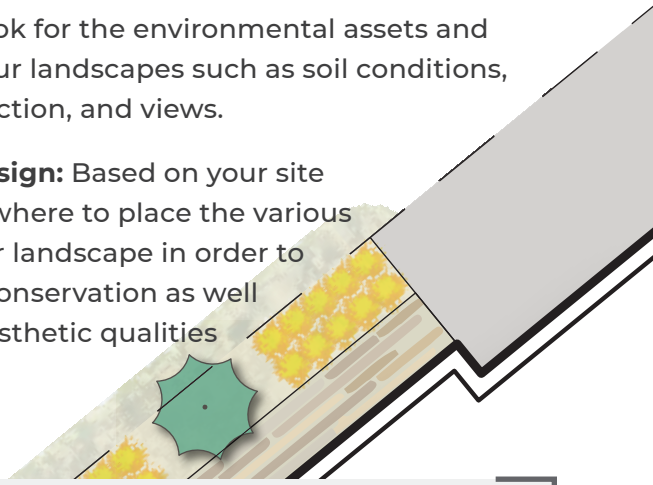
PRINCIPLE #1: Start with a plan

The planning and design stage is an opportunity to consider the needs of those who will use and maintain the space while also acknowledging existing environmental conditions found on the site.

For a landscape design to be water-conserving, it needs to use water efficiently. The planning stage is the optimal time to decide which water efficiency strategies will be used.

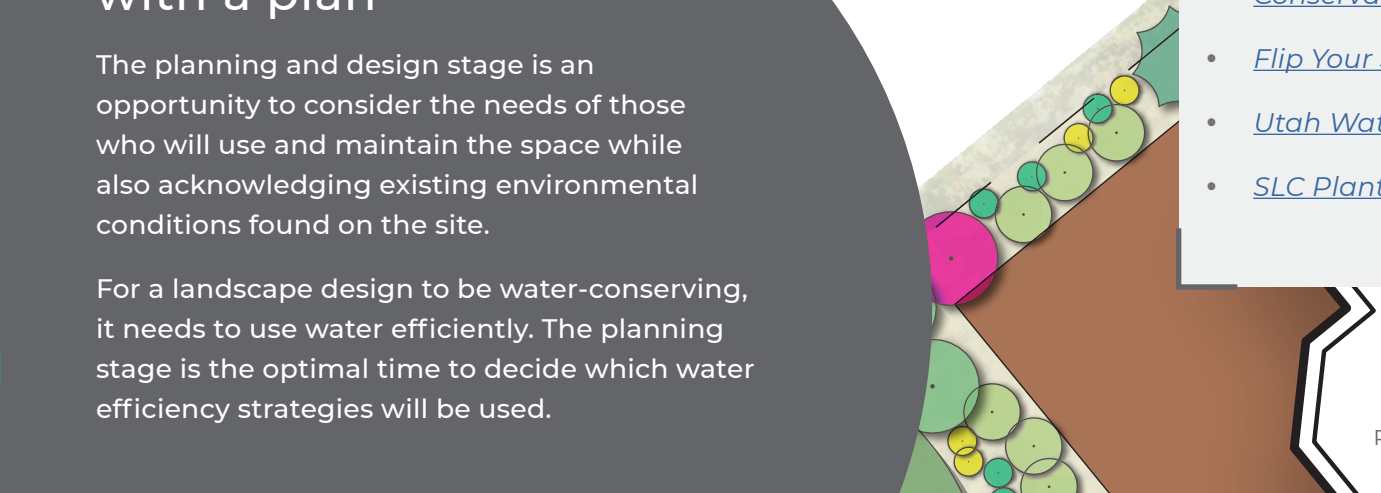
KEY PLANNING & DESIGN CONSIDERATIONS

- **Develop a Plot Plan:** A plot plan is simply a map of your property that includes existing buildings, structures, trees, shrubs, property lines, driveways, gardens, utility lines, slopes, and other possible design limitations.
- **Site Analysis:** Look for the environmental assets and constraints of your landscapes such as soil conditions, slopes, wind direction, and views.
- **Planning the Design:** Based on your site analysis, decide where to place the various elements of your landscape in order to optimize water conservation as well as to enhance aesthetic qualities of your property.



Planning & Design Resources

- *Localscapes® Program*
- *USU Center for Water-efficient Landscaping*
- *Conservation Garden Park*
- *Flip Your Strip Program*
- *Utah Water Savers*
- *SLC Plant List & Hydrozone Schedule*



PRINCIPLE #2: Practical turf-areas reduce over-irrigation

Water-efficient landscaping does not require the elimination of all turfgrass. In fact, turfgrass can be a practical and beneficial component of a water-wise landscape if best practices are followed. The use of turfgrass becomes problematic when it is over-irrigated, used in areas that are challenging to irrigate such as steep slopes or odd-shaped and narrow spaces, and when it is placed in areas where it isn't useful.[4]



Turfgrass Resources

- *Localscapes® Program*
- *The Turfgrass Water Conservation Alliance*
- *USU Center for Water-efficient Landscaping*
- *USU Extension Sustainable Turf*
- *USU Climate Center*
- *Conserve Water Utah Grass Removal Rebates*
- *SLC Plant List & Hydrozone Schedule*

KEY TURFGRASS CONSIDERATIONS

- **Consider functionality:** Turf grass is great for play areas, areas with high traffic, and areas needing temperature, noise, or dust control. If a turf area is only used when it's mowed (such as a park strip), choose a lower maintenance plant or ground cover for that location.
- **Choose species with lower water requirements:** Not all turfgrass species are the same. Choose a species with low water requirements that performs well in Utah.
- **Brown isn't always bad:** Many turfgrasses can withstand considerable drought stress by entering dormancy (turning brown). If a turfgrass is not performing a functional role, consider watering it less.
- **Lawn shape and size matter:** Avoid planting turfgrass in narrow, small, or oddly shaped areas that are difficult to irrigate efficiently.
- **Don't over water:** Water turfgrass separately from other landscape plants and design an irrigation system that doesn't exceed the turf's actual water needs.
- **Enhance turfgrass water-efficiency:** Typical practices such as mowing at taller blade heights, using proper fertilization, and returning grass clippings will lead to healthier turfgrass and improve water efficiency.

PRINCIPLE #3: Soil preparation is the foundation of a quality landscape

Soil is the most basic component of a quality landscape and will have an impact on the growth rate, health, and appearance of plants.[5] Most plants do well under a range of soil conditions, although there are several chemical and physical characteristics that influence quality.



Soil Resources

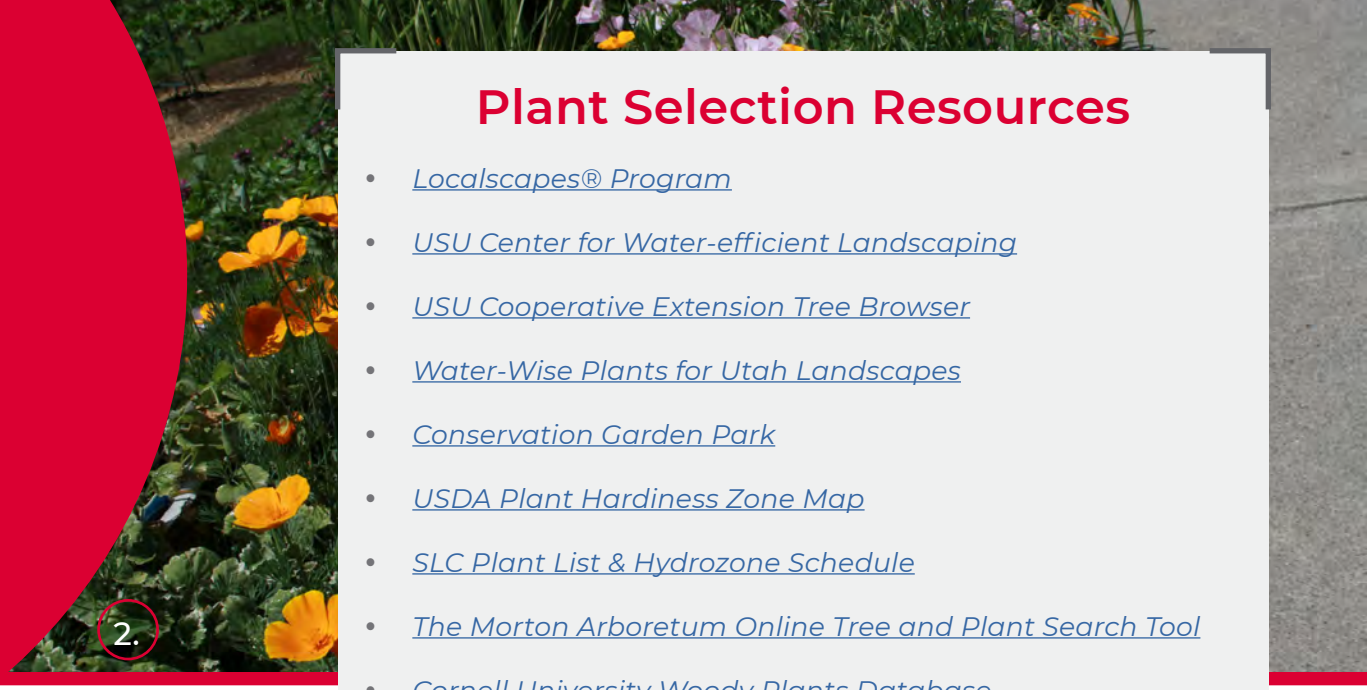
- *Localscapes® Program*
- *USU Center for Water-efficient Landscaping*
- *Soil Testing Laboratory at USU*
- *USU Topsoil Quality Guidelines for Landscaping*
- *SLC Plant List & Hydrozone Schedule*
- *BYU Topsoil Parameters*

KEY SOIL CONSIDERATIONS

- **Soil Texture:** The percentages of sand, silt, and clay in the soil will have an impact on drainage and nutrient retention. Strive for "loamy soils" that contain an appropriate balance of sand, silt, and clay for the best plant growth.
- **Soil Structure:** Small soil particles will clump together, forming large and small pores throughout the soil. These pores offer an important structure for water and air to reach the roots, and hold water.
- **Soil Organic Matter:** Organic material provides plant nutrients and improves water infiltration, drainage, and retention in the soil. Incorporating proper amounts of manure, compost, leaves, and grass clippings are examples of how to add organic matter into your soil.
- **Nutrient Status:** A healthy balance of nitrogen, phosphorus, and potassium is important for proper plant growth. In general, too many or too little soil nutrients will have a negative impact on plant growth and health.
- **Soil pH:** The acidity or alkalinity of soil affects the availability of mineral nutrients for plants. Some plants are acid-loving (lower pH) while others become sensitive to iron deficiency at high pH levels.

PRINCIPLE #4:
Proper plant selection and placement saves water

Selecting the right plant for the right place is critical to creating a water-efficient landscape. Proper placement provides shade, privacy, beauty, efficiency, and can even decrease yard maintenance.[3]



Plant Selection Resources

- *Localscapes® Program*
- *USU Center for Water-efficient Landscaping*
- *USU Cooperative Extension Tree Browser*
- *Water-Wise Plants for Utah Landscapes*
- *Conservation Garden Park*
- *USDA Plant Hardiness Zone Map*
- *SLC Plant List & Hydrozone Schedule*
- *The Morton Arboretum Online Tree and Plant Search Tool*
- *Cornell University Woody Plants Database*
- *J. Frank Schmidt and Son Tree Reference Guide PDF Download*
- *Missouri Botanical Gardens Plant Finder Tool*

KEY PLANT SELECTION & PLACEMENT CONSIDERATIONS

- **Fit and Function:** Choose plants based on desired characteristics and water use.
- **Consider Adapted Plants:** Choose plants that are adapted to the soil, water, temperature, light, and pest considerations of the landscape to help minimize maintenance and water requirements. Note that not all adapted plants need to be native and that native plants are not necessarily water-conserving.
- **Hydrozones:** Group plants according to their water needs.
- **Seasonal Interest:** Foliage, bloom, and seed head displays will vary throughout the year. Consider incorporating spring, summer, and fall interest in each planting group to keep landscapes from looking bare and boring.
- **Hardiness Zone:** Plants that will survive in the Utah climate range between hardiness zones 4-9 and the range in Spanish Fork City is 5-7. Multiple factors can influence a plant's hardiness for a region. Visit the USDA Plant Hardiness Website to learn more and confirm with your professional plant suppliers that the selected plants are hardy for your location.

PRINCIPLE #5: Retain moisture with mulch

Mulch covers the soil and prevents crusting, compaction, and moisture loss. Mulching around trees, shrubs, and flower beds can result in a ten-fold reduction in evaporative water loss from soil. Mulch is also an important visual design element and can be used along walkways, plant borders, and to add color and structure to the landscape.



Mulch Resources

- *Localscapes® Program*
- *USU Center for Water-efficient Landscaping*
- *Water-Wise Landscaping - Mulch*
- *SLC Plant List & Hydrozone Schedule*

KEY MULCH CONSIDERATIONS

- **Organic mulches:** Materials such as wood or bark chips, shredded bark, nut shells, pine needles, and other similar compostable plant materials are examples of organic mulches.
- **Disease and toxic-free:** Make sure organic mulches (wood chips, shredded park, pine needles, etc.) are free from weed seeds, disease-causing organisms, and pesticide and herbicide residues.
- **Nitrogen deficiency:** Nitrogen deficiency can be avoided by composting mulch or by replacing the lost nitrogen using a specific fertilizer applied at specific rates.
- **Inorganic mulches:** Non-organic materials such as gravel and crushed stone are examples of inorganic mulches. Inorganic mulches provide many of the same benefits as organic mulches, but do not add to soil fertility.
- **Mulch application:** Mulch is best applied after planting in the fall or spring once the soil has warmed. It can be used with or without a weed barrier sheet.

PRINCIPLE #6:
Efficient irrigation is critical for conserving water

Grouping plants with similar water needs (hydrozoning) is the first step in developing an efficient irrigation plan. Once plants are properly zoned, develop an irrigation schedule that will apply the appropriate amount of water based on the unique needs of each zone.



Irrigation Resources

- *Localscapes® Program*
- *USU Center for Water-efficient Landscaping*
- *USU Climate Center*
- *SLC Plant List & Hydrozone Schedule*
- *EPA Water Budget Tool Spreadsheet Download*
- *EPA Landscape Water Budget Tool Links & Narratives*
- *EPA Landscape Water Budget Data Finder – by Zip Code Peak Month ETo and Rainfall*
- *EPA WaterSense – Weather-Based Irrigation Controllers, Soil Moisture-based Irrigation Controllers, Spray Sprinkler Bodies*
- *Hunter Irrigation Design & Technical Guides*
- *Rain Bird Irrigation Design Guides*

KEY IRRIGATION CONSIDERATIONS

- **Hydrozones:** Group plants with similar irrigation needs in the same zones.
- **Drip irrigation:** Drip irrigation systems are great for water-efficient landscapes because water goes directly to the plants roots without being wasted on areas that do not need to be watered.
- **Irrigating lawn areas:** Turfgrass has more shallow roots than other landscape plants. It should be irrigated more frequently and not as deeply as other plants.
- **Irrigating trees and shrubs:** The longer and more extensive root systems of trees and shrubs mean they should be watered less frequently but for longer periods of time.
- **Automatic irrigation timers:** Do not forget to adjust an automatic irrigation timer with seasonal weather changes.
- **Irrigation system maintenance:** In order to ensure the most efficient use of water, irrigation system maintenance is critical. Make sure you understand how your system is configured and perform the necessary system maintenance required to keep it running smoothly and efficiently.

PRINCIPLE #7: Proper landscape maintenance keeps plants healthy and helps to conserve water

Landscape maintenance is one of the most important components of a beautiful and lasting landscape. The main activities required to maintain a water-wise landscape are irrigation and irrigation system maintenance, weed control, fertilization, pruning, and pest and disease control.

3.



Landscape Maintenance Resources

- *Localscapes® Program*
- *USU Center for Water-efficient Landscaping*
- *Soil Testing Laboratory at Utah State University*

KEY LANDSCAPE MAINTENANCE CONSIDERATIONS

➔ **Weed control:** Controlling weeds is critical to maintaining a healthy water-wise landscape. Weeds can be removed mechanically, controlled though physical barriers (such as landscape fabric and/or mulch), or through the use of herbicides as a last resort.

➔ **Fertilization:** Plants require nutrients to grow and remain healthy (see soils discussion on page 13). In most cases, adding composted organic matter prior to planting will improve the fertility of your soil. The key is to know the habitat your plants are adapted to prior to planting and, if you don't know, err on the side of less rather than more nutrients, as over-fertilizing only weakens plants. Have your soil tested prior to installing plants so that you have an understanding of your specific landscape conditions (see the Utah State University Analytical Laboratory for quick and inexpensive soil sampling services).

➔ **Controlling plant growth:** Activities such as pruning, deadheading, and dividing will maintain the health and appearance of your plants by removing dead or undesirable growth and stimulating, reinvigorating, or re-directing their growth.

➔ **Pest and disease control:** Fighting insect or plant disease starts with preventing them in the first place. Prevention involves many of the principles that have been described, including using landscape plants adapted to your climate, diversifying plant choices, and maintaining optimal plant health by not over-fertilizing and by using the appropriate amount of water.

Inspiration & Resources

How and when you decide to transform your yard into a water-wise landscape will depend on individual goals, time, budget, and other factors. Not everything has to be changed at once, and starting small and working in stages is an excellent approach.



Start with a park strip, side yard, or the "central open shape" if you aren't ready or able to transform your entire yard. Need ideas? Visit a local demonstration garden. Need help? Take advantage of available resources, programs, and classes. Remember, water-wise design elements and principles can be customized to fit any yard and scaled to fit any budget.

FLIP YOUR STRIP PROGRAMS

Park strips are one of the largest water wasters in a residential landscape. These hot, narrow, strips of land are a challenge to water, and overhead spray often results in the sidewalk and street receiving more water than the park strip. For these reasons, "Flip your strip" programs offer rebates to remove turf from park strips and transform them into attractive, low-water alternatives. Visit utahwatersavers.com for more information.



DEMONSTRATION GARDENS

Visiting a demonstration garden is a great way to find ideas and inspiration on how to design and maintain a water-wise landscape. They showcase plants adapted to your specific region and provide classes and other educational resources.

- Conservation Garden Park at Jordan Valley Water Conservancy District | 8275 South 1300 West, West Jordan
- Ogden Botanical Gardens | 1750 Monroe Blvd., Ogden
- USU Botanical Center | 80 East 725 South Sego Lily Dr., Kaysville
- Swaner EcoCenter |1258 Center Drive, Park City
- Red Butte Garden | 300 Wakara Way, Salt Lake City
- Sego Lily Gardens | 10000 South Centennial Pkwy, Sandy

DESIGN INSPIRATION

The following are three examples of different sized lots that have been converted into water-conserving yards. Each reflects the specific needs and desires of the particular owner, illustrating that no lot is too small or too large, and no idea is too divergent to be incorporated into your own personal expression.

Once your new landscape is installed, you are likely to understand that the value of a water-wise landscape far exceeds the obvious reduction in water use. Some of the unanticipated joys include new splants and unexpected splashes of vegetative color in your yard, cooler air temperatures, accommodation of a wider range of outdoor activities in your yard, and the pride knowing that you achieved this on your own!

LARGE LOT

ALL ABOUT AGRICULTURE







This is an example of a 3/4 acre lot. The large lot is carefully designed to provide a range of activities suited to the needs and personality of the homeowner. In this example, “agriculture” is the primary theme, as illustrated by the rows of plants in the park strip, the extensive orchards in the furthest reaches of the rear yard, and the incorporation of a vegetable garden and chickens completing the “edible garden”.



STANDARD LOT

STONE & CIRCLES

This is an example of a standard 1/4 acre lot that predominates in many parts of Spanish Fork. The front yard lot is laid out in a simple manner, utilizing bold circular forms to create a central open space and stone patio, both backed by a colorful and texture-rich perennial garden. The rear yard is more active, bringing a small lawn and a small playground together around the half-circle patio and entertainment area. The two yards are linked with a stone pathway on the widest side, making the front and back extensions of the other.

CIRCULAR PATIO



SMALL PLAYGROUND



STONE PATHWAY





SMALL LOT

THE POSTAGE STAMP

This is an example of a small urban lot approximately 1/8 acres in size found in the older, more central locations of the city. The design makes the most of a “postage stamp” sized lot, incorporating small lawns, gathering spaces, urban gardening and even a small orchard. The result is an attractive and intimate space where small surprises abound.

SMALL LAWNS

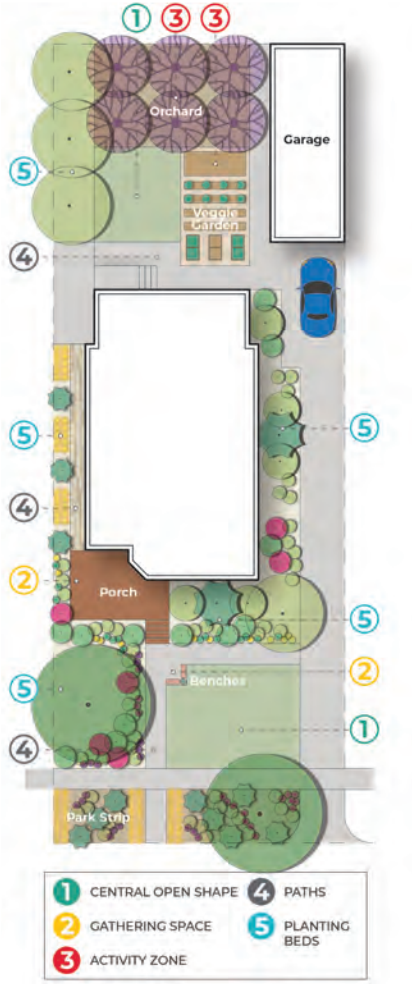


INTIMATE SPACES



URBAN GARDENING





RESOURCE MATRIX

Click on the resource links below to learn more about specific water-wise landscape design principles, resources, programs, funding, and classes.

Resources	Planning & Design	Turfgrass	Soil/ Topsoil	Plant Selection	Mulch	Irrigation	Landscape Maintenance	Resources/ Programs/ Funding	Classes
Spanish Fork Water-wise Landscape Design Elements & Principles Guidebook (2022)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Localscapes® Program	✓	✓	✓	✓	✓	✓	✓	✓	✓
The Turfgrass Water Conservation Alliance		✓							
Utah State University Center for Water-efficient Landscaping	✓	✓	✓	✓	✓	✓	✓	✓	
Utah State University Extension Sustainable Turf		✓						✓	
Utah State University Cooperative Extension Tree Browser				✓					
Utah State University Climate Center		✓				✓		✓	
Conserve Water Utah Grass Removal Rebates		✓						✓	
Soil Testing Laboratory at Utah State University			✓						
Topsoil Quality Guidelines for Landscaping			✓						
Water-Wise Plants for Utah Landscapes				✓					
Conservation Garden Park	✓			✓					✓
USDA Plant Hardiness Zone Map				✓					
Water-Wise Landscaping - Mulch					✓				
Flip Your Strip Program	✓							✓	
Utah Water Savers	✓							✓	✓
Salt Lake City Plant List and Hydrozone Schedule 2013, Salt Lake City Public Utilities	✓	✓	✓	✓	✓	✓		✓	
EPA Landscape Water Budget Tool – Download excel tool (xlsx)						✓		✓	
EPA Landscape Water Budget Tool – Additional links and narratives						✓		✓	
EPA Landscape Water Budget Data Finder – by Zip Code Peak Month ETo and Rainfall						✓		✓	

RESOURCE MATRIX CONTINUED

Resources	Planning & Design	Turfgrass	Soil/ Topsoil	Plant Selection	Mulch	Irrigation	Landscape Maintenance	Resources/ Programs/ Funding	Classes
EPA WaterSense – Weather-Based Irrigation Controllers, Soil Moisture-based Irrigation Controllers, Spray Sprinkler Bodies						✓		✓	
Hunter Irrigation – Link to design literature and technical guides						✓			
Rain Bird Irrigation – Link to design guides						✓			
Brigham Young University – Topsoil Parameters			✓						
The Morton Arboretum Online Tree and Plant Search Tool				✓					
Cornell University Woody Plants Database				✓					
J. Frank Schmidt and Son Tree Reference Guide PDF Download				✓					
Missouri Botanical Gardens Plant Finder Tool				✓					

IN CONCLUSION

"There is not an entity or individual that is entirely responsible for, or is the exception to, water efficiency. We all need to do what we can to use water wisely. Whether that step is taking a shorter shower, updating infrastructures and appliances, fixing a leak, adjusting sprinkler timers, installing secondary water meters, using a tiered rate, running or following an education campaign, or installing water-wise landscaping. Each step helps us to create changes that will assist in reaching our goals in being water-wise. We do not conserve water because we have a wet or dry year, we conserve because, as Utahns, we are not wasteful."[1]

- UTAH'S REGIONAL M&I WATER CONSERVATION GOALS 2019 REPORT

WORKS CITED

1 Utah Division of Water Resources. (2019, November). Utah's Regional M&I Water Conservation Goals. Retrieved November 11, 2022, from https://conservewater.utah.gov/regional-water-conservation-goals/.

2 "Principles of Water Wise Landscaping." Utah State University Extension Center for Water-Efficient Landscaping. Retrieved September 20, 2022, from https://extension.usu.edu/cwel/principles.

3 An Introductory Guide to an innovative, practical landscape designed for Utah." Localscapes. Retrieved September 20, 2022, from https://localscapes.com/localscapesresources.

4 Kopp, Kelly and Johnson, Paul, "Water-Wise Landscaping: Practical Turfgrass Area" (2011). CWEL Extension Fact Sheets. Paper 19.

5 "Top Soil Quality Guidelines for Landscaping." Utah State University Extension Yard and Garden. Retrieved September 21, 2022, from: https://extension.usu.edu/yardandgarden/research/topsoil-quality-guidelines-for-landscaping.

IMAGES

COVER

1 Localscapes (2021, Sept. 28). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

2 Localscapes (2020, Sept. 10). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

3 USU Extension Photo Gallery (2011, June 29). Ornamental Grasses - Festuca [Digital image]. Retrieved November 21, 2022, from https://caas.usu.edu/marketing/photo-collection.

LANDSCAPE DESIGN SIMPLIFIED

1 Localscapes (2019, Nov. 6). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

2 Localscapes (2021, Sept. 28). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

3 Localscapes (2018, Nov. 19). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

4 Localscapes (2022, April 10). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

5 Localscapes (2020, Oct. 5). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

6 Localscapes (2021, May. 5). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

7 Localscapes (2018, Nov. 5). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

8 Rick Egan. The Salt Lake Tribune. Activity zone, at Conservation Garden Park on the grounds of the Jordan Valley Water Conservancy District, on Wednesday, Sept. 14, 2022. Retrieved from https://www.upr.org/utah-news/2022-09-21/heres-what-these-salt-lake-valley-cities-are-doing-to-save-water.

9 Localscapes (2022, Sept. 17). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

10 Localscapes (2019, Sept. 25). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

11 Localscapes (2021, Sept. 28). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

12 USU Extension Photo Gallery (2008, Oct. 1). USU Botanical Center Path [Digital image]. Retrieved November 21, 2022, from https://caas.usu.edu/marketing/photo-collection.

13 Localscapes (2020, Sept. 15). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

14 Localscapes (2022, May. 18). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

15 Localscapes (2021, Jan. 29). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

PRINCIPLES

1 Localscapes (2020, Sept. 10). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

2 USU Extension Photo Gallery (2014, June 7). Alterniscapes [Digital image]. Retrieved November 21, 2022, from https://caas.usu.edu/marketing/photo-collection.

3 USU Extension Photo Gallery (2011, Feb. 14). Yard/ Garden Pruning [Digital image]. Retrieved November 21, 2022, from https://caas.usu.edu/marketing/photo-collection.

INSPIRATION & RESOURCES

1 Localscapes (2020, Oct. 23). Photos [Facebook page]. Facebook. Retrieved from https://www.facebook.com/localscapes.

2 Rick Egan. The Salt Lake Tribune. Activity zone, at Conservation Garden Park on the grounds of the Jordan Valley Water Conservancy District, on Wednesday, Sept. 14, 2022. Retrieved from https://www.upr.org/utah-news/2022-09-21/heres-what-these-salt-lake-valley-cities-are-doing-to-save-water.

For questions regarding the information in this guidebook, please contact:

DAVE ANDERSON

COMMUNITY AND ECONOMIC DEVELOPMENT DIRECTOR

C 801.804.4586

DANDERSON@SPANISHFORK.ORG

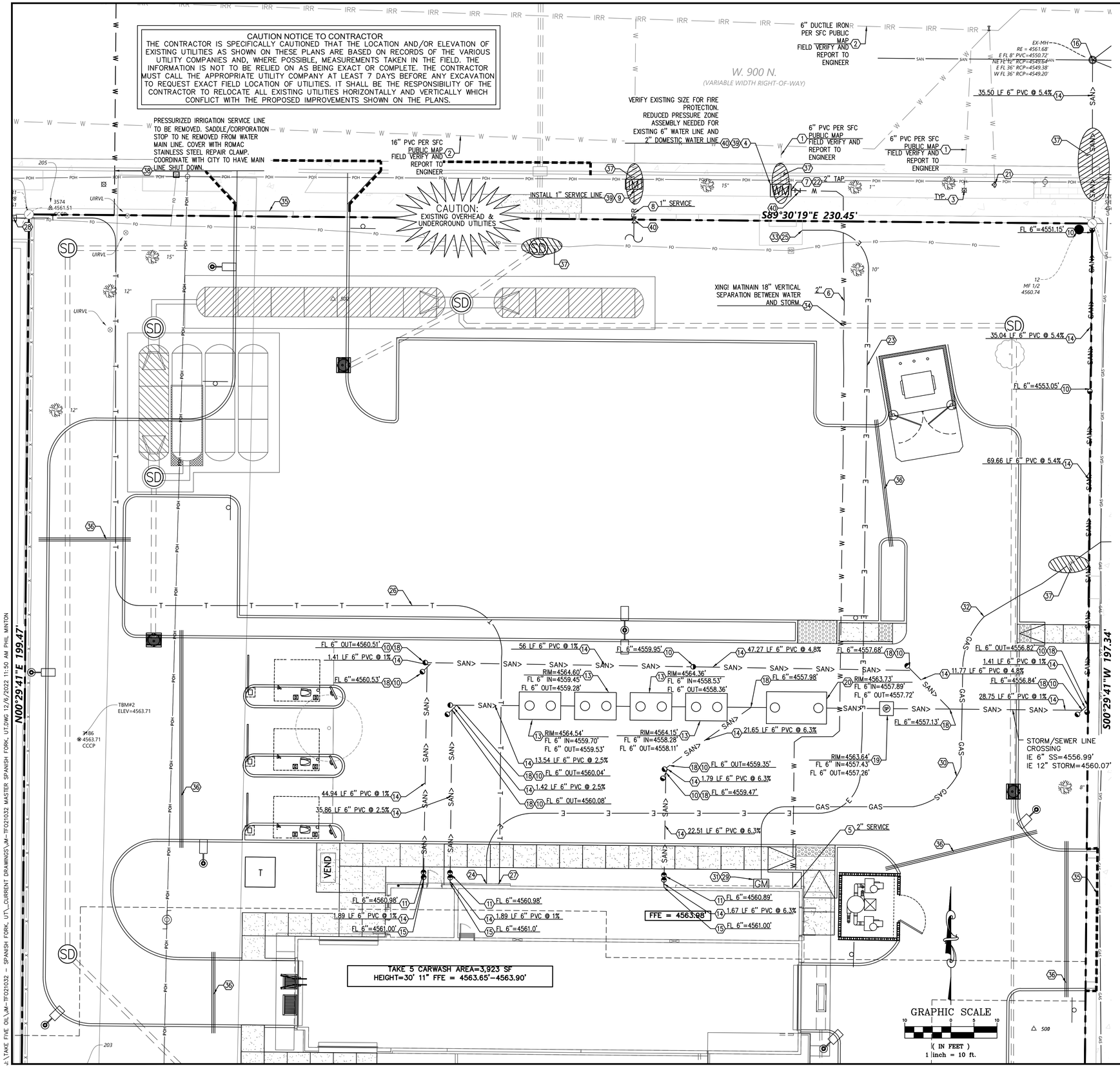
40 S MAIN ST

SF, UT 84660

SPANISHFORK.ORG

CAUTION NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 7 DAYS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



BENCHMARKS

TBM #1: AN "X" CUT ON TOP OF CONCRETE PAVING WITHIN N. MAIN STREET RIGHT-OF-WAY, LOCATED NEAR THE EAST PROPERTY LINE, APPROXIMATELY 2 FEET EAST AND 14 FEET SOUTH OF A SIGN POST. ELEVATION=4561.80 FEET.

TBM #2: AN "X" CUT ON TOP OF A CONCRETE BACK OF CURB LOCATED WITHIN THE SUBJECT PROPERTY NEAR THE WEST PROPERTY LINE AND LOCATED APPROXIMATELY 19 FEET WEST AND 39 FEET NORTH OF A POWER POLE. ELEVATION=4563.71 FEET.

FLOODNOTE

ACCORDING TO THE F.I.R.M. NO. 49049C0757F, THE SUBJECT PROPERTY LIES IN ZONE X AND DOES NOT LIE WITHIN A FLOOD PRONE HAZARD AREA, PER MAP REVISION DATED JUNE 19, 2020.

EXISTING LEGEND:

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- HYDRANT
- GATE VALVE
- WATER METER
- WATER MANHOLE
- DECIDUOUS TREE
- CATCH BASIN
- IRRIGATION VALVE
- CONIFEROUS TREE
- FOUND MONUMENT
- SET MONUMENT
- ELECTRIC BOX
- ELECTRIC METER
- POWER POLE WITH LIGHT
- GUY WIRE
- POWER POLE
- TELEPHONE BOX
- SIGN
- CABLE TV BOX
- LIGHT POLE
- STEEL/WOOD POST
- ELECTRIC BOX
- HANDICAPPED PARKING SPACE
- SECTION LINE
- BOUNDARY LINE
- OFF-SITE PROPERTY LINE
- EASEMENT LINE
- FIBER LINE
- POWER OVERHEAD
- CURB & GUTTER
- CONCRETE SURFACE
- ASPHALT SURFACE
- BRICK PAVERS
- WATERMAIN
- SANITARY SEWER
- UNDERGROUND GAS LINE
- POWER UNDERGROUND
- STORM SEWER

U.C.P.R.U. UTAH COUNTY PUBLIC RECORDS, UTAH
TBM TEMPORARY BENCHMARK
"X" CUT "X" CUT IN CONCRETE
IRF IRON ROD FOUND
CIRS 5/8 INCH IRON ROD SET WITH CAP STAMPED "JM CIVIL ENGINEERING"

PROPOSED LEGEND:

- PROPOSED CURB & GUTTER
- LIMITS OF FULL DEPTH SAWCUT
- FIRELANE
- STOP BAR STRIPING
- ACCESSIBLE SPACES
- ADA RAMP
- SAND/OIL INTERCEPTOR
- RECLAIM TANK
- CLEAN-OUT
- DOUBLE CLEAN-OUT
- BOLLARD
- SIGN
- LIGHT POLE
- GAS METER
- WATER METER
- IRRIGATION METER
- SANITARY SEWER MANHOLE
- SAMPLE PORT
- NYLOPLAST COMBINATION INLET
- NYLOPLAST MANHOLE
- NYLOPLAST GRATE INLET

UTILITY KEY NOTES:

1. EXISTING WATER LATERAL LINE. (SEE NOTE FOR SIZE)
2. EXISTING WATER MAIN LINE. (SEE NOTE FOR SIZE)
3. EXISTING WATER METER
4. 2" DOMESTRIC WATER METER
5. DOMESTIC WATER LINE POINT OF ENTRY. (SEE MEP PLANS)
6. DOMESTIC WATER LINE. (SEE NOTE FOR SIZE)
7. DOMESTIC WATER LINE POINT OF CONNECTION.
8. IRRIGATION WATER LINE. (SEE NOTE FOR SIZE)
9. IRRIGATION WATER LINE POINT OF CONNECTION, SEE IRRIGATION PLAN FOR IRR. SYSTEM.
10. SANITARY SEWER SINGLE CLEAN OUT.
11. SANITARY SEWER DOUBLE CLEAN OUT.
12. SANITARY SEWER WYE. (SEE CITY DETAILS ON SHEET C740.)
13. RECLAMATION TANKS. (PER ARCH./MEP PLANS)
14. SANITARY SEWER LINE. (SEE NOTE FOR TYPE, SIZE AND SLOPE)
15. SANITARY SEWER POINT OF ENTRY. (SEE NOTE FOR TYPE, SIZE AND SLOPE)
16. SANITARY SEWER POINT OF CONNECTION. (CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION)
17. SANITARY SEWER 45° BEND.
18. SANITARY SEWER WYE.
19. SAMPLE PORT, (SEE ARCH./MEP PLANS)
20. SAND/OIL INTERCEPTOR (PER ARCH./MEP PLANS)
21. EXISTING FIRE HYDRANT.
22. CONTRACTOR SHALL COORDINATE WITH WATER UTILITY DEPARTMENT TO ENSURE THAT SERVICE IS NOT INTERRUPTED AT ANY TIME.
23. UNDERGROUND ELECTRIC LINE.(COORDINATE WITH ELECTRIC COMPANY FOR CONDUIT SIZES)
24. METERING EQUIPMENT AND ELECTRIC LINE POINT OF ENTRY. (PER MEP PLANS AND COORDINATE WITH ELECTRIC COMPANY).
25. ELECTRIC LINE POINT OF CONNECTION. (COORDINATE WITH ELECTRIC COMPANY)
26. UNDERGROUND TELEPHONE LINE ~ 2-1" CONDUITS. (VERIFY SIZE WITH TELEPHONE COMPANY)
27. TELEPHONE LINE POINT OF ENTRY. (PER MEP PLANS)
28. TELEPHONE LINE POINT OF CONNECTION (COORDINATE WITH TELEPHONE COMPANY).
29. GAS METER (COORDINATE WITH GAS COMPANY).
30. GAS LINE. (PER GAS COMPANY STANDARDS)
31. GAS LINE POINT OF ENTRY. (PER MEP PLANS)
32. GAS LINE POINT OF CONNECTION.
33. EXISTING TRANSFORMER. RE-USE EXISTING TRANSFORMER IF POSSIBLE. (COORDINATE WITH ELECTRIC COMPANY).
34. MAINTAIN 18" VERTICAL SEPARATION.
35. SAWCUT EXISTING PAVEMENT/SURFACE. COORDINATE WITH LOCAL JURISDICTION AND ADJOINING PROPERTY OWNERS FOR CLOSURE.
36. 3 - 4" PVC SCH. 40 CONDUIT SLEEVES
37. POTHOLE PRIOR TO CONSTRUCTION TO IDENTIFY EXISTING UTILITIES
38. PRESSURIZED IRRIGATION SERVICE LINE TO BE DISCONNECTED. SADDLE/CORPORATION STOP NEEDS TO BE REMOVED FROM WATER MAIN LINE AND COVERED WITH ROMAC STAINLESS STEEL REPAIR CLAMP. COORDINATE WITH WATER DEPARTMENT TO HAVE WATER MAIN LINE SHUT DOWN. COORDINATE WITH CITY WATER DEPARTMENT FOR VAULT AND HOT BOX DETAILS AND PLACEMENT.
39. RPZA. COORDINATE WITH CITY WATER DEPARTMENT FOR DETAIL AND PLACEMENT.
40. RPZA. COORDINATE WITH CITY WATER DEPARTMENT FOR DETAIL AND PLACEMENT.

Know what's below. Call before you dig.

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH

891 N. MAIN ST.,
SPANISH FORK, UT 84660

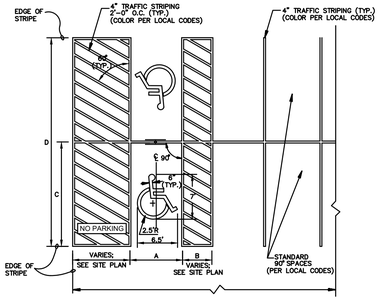
REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

UTILITY PLAN

C 600

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/6/2022 11:50 AM PHIL MINTON



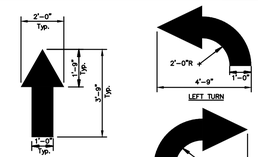
MINIMUM DIMENSION CHART		
A	8' (VAN 8')	8' (VAN 8')
B	5' (VAN 8')	5' (VAN 8')
C	18'	20'
D	36'	40'

NOTE: SEE SITE PLAN FOR TOTAL LAYOUT

NOTE: ALL DIMENSIONS ARE TO ℄ OF STRIPE UNLESS OTHERWISE INDICATED

90° ACCESSIBLE PARKING SPACE STRIPING

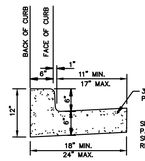
N.T.S.



NOTE: ALL TRAFFIC FLOW ARROWS TO BE SOLID REFLECTIVE TRAFFIC PAINT PER DIMENSIONS ABOVE. (COLOR PER LOCAL CODES)

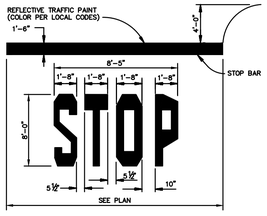
TRAFFIC FLOW ARROW

N.T.S.



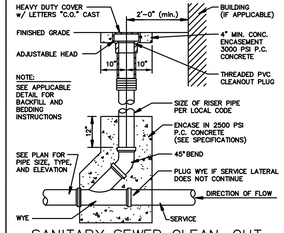
TYPE "A" CONCRETE CURB AND GUTTER

N.T.S.



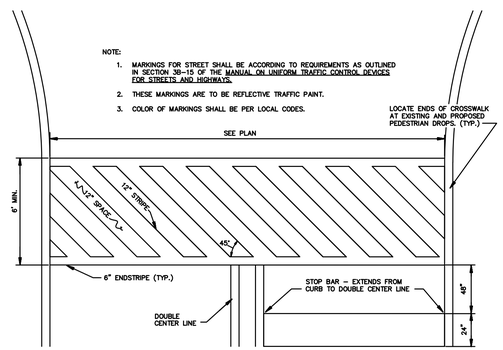
STOP BAR

N.T.S.



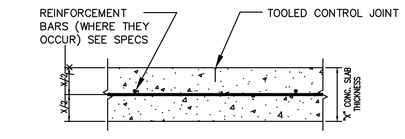
SANITARY SEWER CLEAN-OUT

N.T.S.



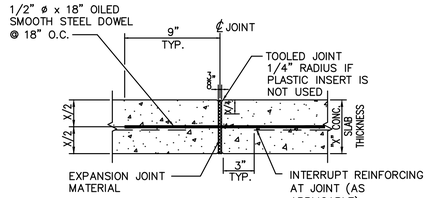
CROSSWALK MARKINGS

N.T.S.



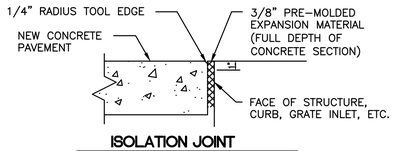
CONTROL JOINT

N.T.S.



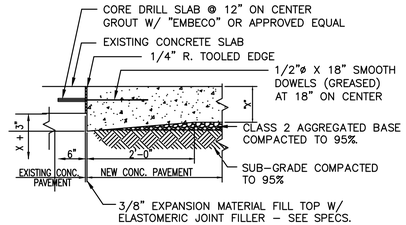
EXPANSION JOINT

N.T.S.



ISOLATION JOINT

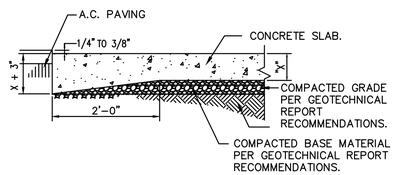
N.T.S.



NOTE
"X" = PROPOSED CONCRETE PAVEMENT SECTION.

TYPICAL EDGE OF EXISTING TO NEW CONCRETE

N.T.S.



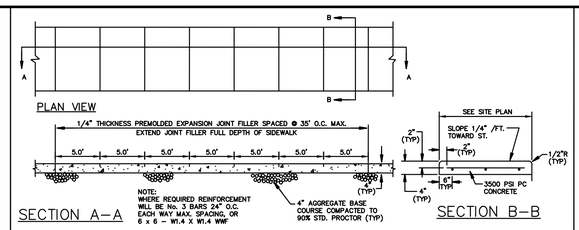
NOTE
"X" = PROPOSED CONCRETE PAVEMENT SECTION.

TYPICAL EDGE OF CONC. SLAB

N.T.S.

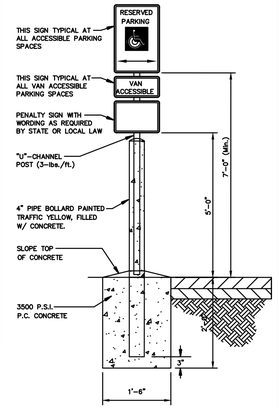
CONCRETE PAVING JOINTS

N.T.S.



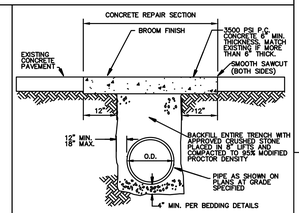
CONCRETE SIDEWALK

N.T.S.



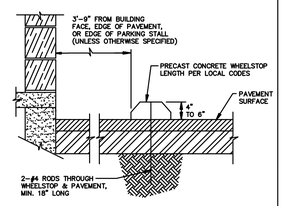
ACCESSIBLE PARKING SIGN

N.T.S.



CONCRETE STREET OR DRIVE CUT / REPAIR

N.T.S.



PRECAST CONCRETE WHEELSTOP

N.T.S.

WATER LINE

N.T.S.

SANITARY SEWER

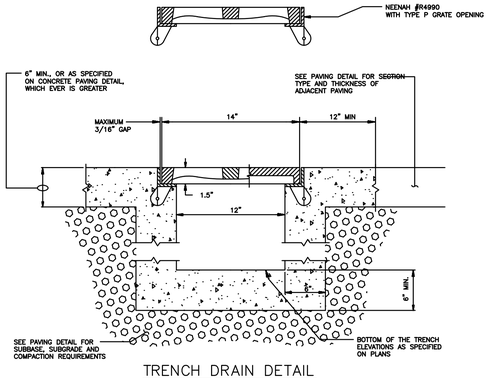
N.T.S.

GENERAL NOTES

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR. (SEE SPECIFICATIONS FOR GRADATION)
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-89.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

SANITARY SEWER AND WATER LINE TRENCH AND BEDDING

N.T.S.



TRENCH DRAIN DETAIL

N.T.S.

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH

891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	PDM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

DETAILS

C 700

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 MASTER SPANISH FORK, UT.DWG 12/5/2022 2:22 PM PHIL MINTON

Section 2724

Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall be of the road and highway structure type as indicated on the contract drawings and referenced within the contract specifications. The **ductile iron frame and grate** for each of these structures is to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The road and highway structure shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc. or prior approved equal.

MATERIALS
The road and highway structure required for this contract shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured form PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the structure. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grate and frame for all road and highway structures shall be ductile iron and shall be made specifically for each so as to provide a round bottom flange that closely matches the diameter of the PVC basin body. The grate and frame shall be capable of supporting H-20 wheel loading for traffic areas. The metal used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05 for ductile iron.

INSTALLATION
The specified PVC road and highway structure shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for the road and highway structure shall be placed and compacted uniformly in accordance with ASTM D2321. The road and highway structure body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For H-20 load rated installations, a concrete ring will be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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DRAWN BY JJC	MATERIAL	ADS / Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 11-13-13			
REVISED BY NMH	PROJECT NO./NAME	TITLE	2 FT X 2 FT & 2 FT X 3 FT ROAD & HIGHWAY STRUCTURE SPECIFICATIONS
DATE 03-16-16			
DWG SIZE A	SCALE 1:1 SHEET 1 OF 1	DWG NO. 7001-110-077	REV F

Section 2724

Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall be of the road and highway structure type as indicated on the contract drawings and referenced within the contract specifications. The ductile iron frame and grate for each of these structures is to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The road and highway structure shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc. or prior approved equal.

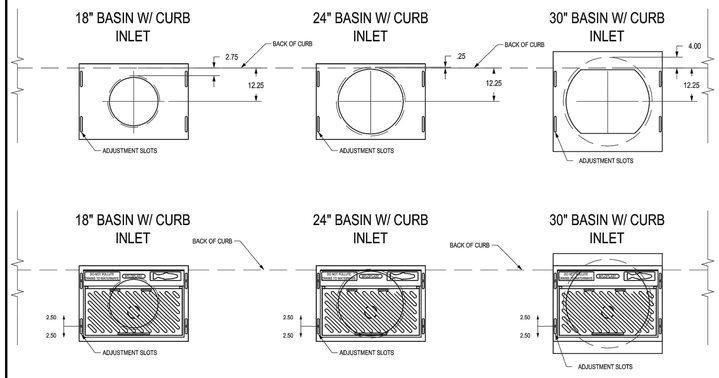
MATERIALS
The road and highway structure required for this contract shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured form PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the structure. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grate and frame for all road and highway structures shall be ductile iron and shall be made specifically for each so as to provide a round bottom flange that closely matches the diameter of the PVC basin body. The grate and frame shall be capable of supporting H-20 wheel loading for traffic areas. The metal used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05 for ductile iron.

INSTALLATION
The specified PVC road and highway structure shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for the road and highway structure shall be placed and compacted uniformly in accordance with ASTM D2321. The road and highway structure body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For H-20 load rated installations, a concrete ring will be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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DRAWN BY JJC	MATERIAL	ADS / Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 11-13-13			
REVISED BY NMH	PROJECT NO./NAME	TITLE	2 FT X 2 FT & 2 FT X 3 FT ROAD & HIGHWAY STRUCTURE SPECIFICATIONS
DATE 03-16-16			
DWG SIZE A	SCALE 1:1 SHEET 1 OF 1	DWG NO. 7001-110-077	REV F

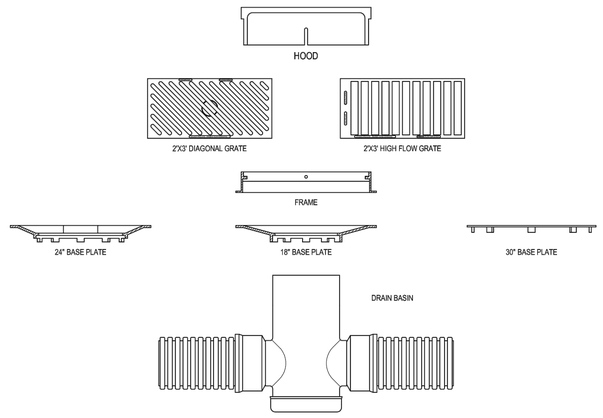


NOTES:
1. CASTINGS SHALL BE DUCTILE IRON MEETING ASTM A536 70-50-05.
2. CURB INLET FRAME IS ADJUSTABLE 2.5" BOTH WAYS FROM CENTER OF SLOTS
3. DIMENSIONS ARE TAKEN FROM BACK OF CURB TO O.D. OF BASIN
4. DIMENSIONS ARE FOR REFERENCE ONLY
5. DIMENSIONS ARE IN INCHES

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DATE 10-23-14			
APPD BY CJA	PROJECT NO./NAME	TITLE	CURB INLET INSTALLATION REFERENCE FOR 18"-30" NYLOPLAST DRAIN BASINS
DATE 10-23-14			
DWG SIZE A	SCALE 1:25 SHEET 1 OF 1	DWG NO. 7002-110-103	REV B

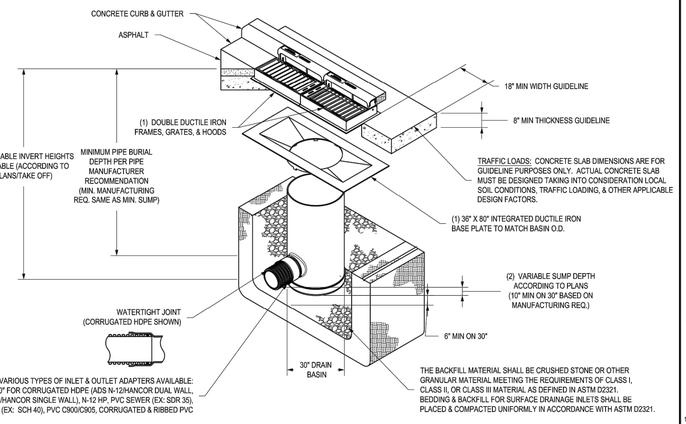
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DATE 06-21-01			
APPD BY CCA	PROJECT NO./NAME	TITLE	2 FT X 3 FT FAMILY
DATE 09-03-13			
DWG SIZE A	SCALE 1:20 SHEET 1 OF 1	DWG NO. 7002-110-008	REV F

NYLOPLAST DOUBLE 2 FT X 3FT CURB INLET STRUCTURE USING 36" X 80" DUCTILE IRON BASE PLATE

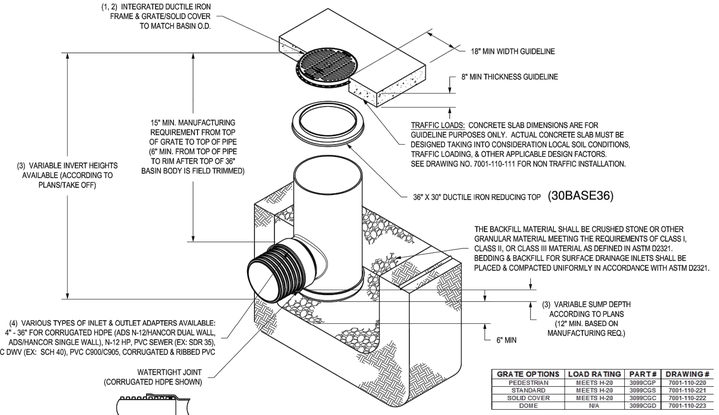


1 - FRAMES, GRATES, HOODS, & BASE PLATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
3 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
4 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
5 - ALL CURB INLET GRATE OPTIONS (DIAGONAL, & HIGH FLOW) SHALL MEET H-20 LOAD RATING

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DATE 9-5-17			
APPD BY NMH	PROJECT NO./NAME	TITLE	DOUBLE 2 FT X 3 FT CURB INLET STRUCTURE USING DUCTILE IRON 36" X 80" BASE PLATE
DATE 9-5-17			
DWG SIZE A	SCALE 1:40 SHEET 1 OF 1	DWG NO. 7002-110-123 A	REV A

NYLOPLAST 36" DRAIN BASIN: 2836AG _ _X



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-20	3099CGP	7001-110-220
STANDARD	MEETS H-20	3099CGS	7001-110-221
SOLID COVER	MEETS H-20	3099CGC	7001-110-222
DOME	N/A	3099CGD	7001-110-223

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES & REDUCING TOP SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASIN BODIES OVER 84" DUE TO SHIPPING RESTRICTIONS.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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DATE 9-21-18			
APPD BY NMH	PROJECT NO./NAME	TITLE	36" DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DATE 9-21-18			
REVSD BY NMH			
DATE 10-04-21			
APPD BY NMH			
DATE 10-04-21			
DWG SIZE A	SCALE 1:40 SHEET 1 OF 1	DWG NO. 7001-110-526	REV B

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
09/02/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	
	11/08/22	THIRD SUBMITTAL	

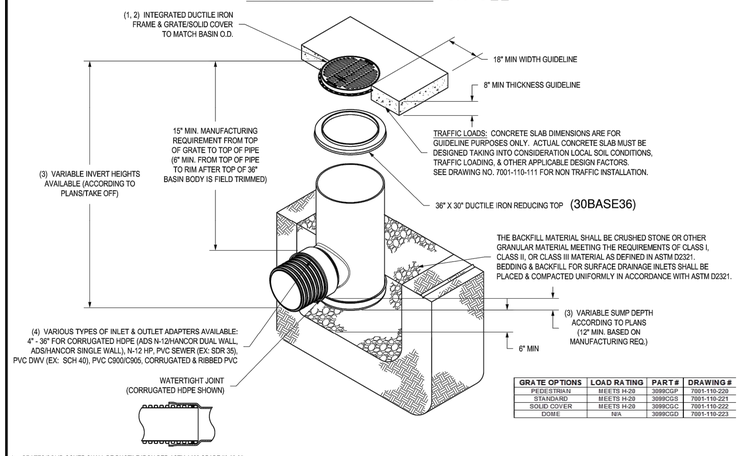
PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 11/08/22

NYLOPLAST DETAILS

C 710

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 DETAIL SHEETS.DWG 11/30/2022 8:45 AM PHIL MINTON

NYLOPLAST 36" DRAIN BASIN: 2836AG _ _X



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-20	3099CGP	7001-110-220
STANDARD	MEETS H-20	3099CGS	7001-110-221
SOLID COVER	MEETS H-20	3099CGC	7001-110-222
DOME	N/A	3099CGD	7001-110-223

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES & REDUCING TOP SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASIN BODIES OVER 84" DUE TO SHIPPING RESTRICTIONS.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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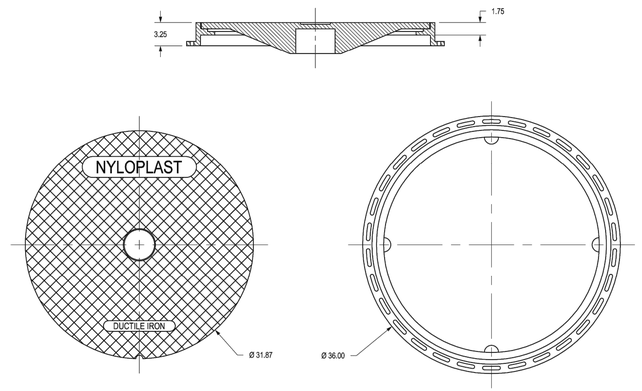
DRAWN BY	NMH
DATE	9-21-10
APPD BY	NMH
DATE	9-21-10
REVSD BY	NMH
DATE	10-04-21
APPD BY	NMH
DATE	10-04-21
DWG SIZE	A
MATERIAL	
PROJECT NO./NAME	
SCALE	1:40 SHEET 1 OF 1

3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2440
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: 30" DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DWG NO. 7001-110-026 REV B

3099CGC

APPROX. WEIGHT WITH FRAME = 262.50 LBS



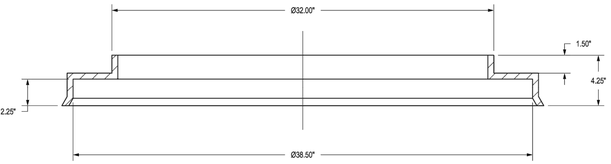
DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
GRATE MEETS H-20 LOAD RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-026

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DRAWN BY	EBC
DATE	3-8-06
REVISED BY	EBC
DATE	3-13-10
DWG SIZE	A
MATERIAL	DUCTILE IRON
PROJECT NO./NAME	
SCALE	1:10 SHEET 1 OF 1

3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2440
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: 30 IN SOLID COVER ASSEMBLY - TYPE B
DWG NO. 7001-110-222 REV C



1 - REDUCING ADAPTER PLATE SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
4 - DIMENSIONS ARE IN INCHES

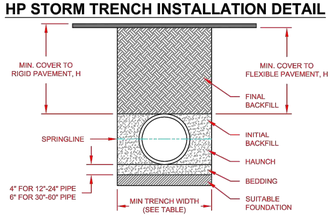
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DRAWN BY	NMH
DATE	10-4-21
APPD BY	NMH
DATE	10-4-21
DWG SIZE	A
MATERIAL	DUCTILE IRON
PROJECT NO./NAME	
SCALE	1:6 SHEET 1 OF 1

3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2440
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: 36" X 30" DUCTILE IRON REDUCING PLATE FOR 36" DRAIN BASIN BODIES
DWG NO. 7001-110-579 REV A

HP STORM TRENCH INSTALLATION DETAIL



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE, 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
7. FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04.

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD)*
12" - 48" (300mm - 1200mm)	12" (300mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, ft

	CLASS I		CLASS II			CLASS III		CLASS IV
PIPE DIA	COMPACTED	DUMPED	95%	90%	85%	95%	90%	95%
12" (300mm)	41 (12.5m)	21 (6.4m)	28 (8.5m)	21 (6.4m)	16 (4.9m)	20 (6.1m)	16 (4.9m)	16 (4.9m)
15" (375mm)	42 (12.8m)	21 (6.4m)	29 (8.8m)	21 (6.4m)	16 (4.9m)	21 (6.4m)	16 (4.9m)	16 (4.9m)
18" (450mm)	44 (13.4m)	21 (6.4m)	30 (9.1m)	21 (6.4m)	16 (4.9m)	18 (5.5m)	14 (4.3m)	14 (4.3m)
24" (600mm)	30 (9.1m)	15 (4.8m)	21 (6.4m)	15 (4.6m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
30" (750mm)	39 (11.9m)	19 (5.8m)	27 (8.2m)	19 (5.8m)	14 (4.3m)	19 (5.8m)	15 (4.6m)	14 (4.3m)
36" (900mm)	28 (8.5m)	28 (8.5m)	20 (6.1m)	14 (4.3m)	10 (3.0m)	14 (4.3m)	11 (3.4m)	10 (3.0m)
42" (1050mm)	30 (9.1m)	14 (4.3m)	21 (6.4m)	14 (4.3m)	10 (3.0m)	15 (4.6m)	11 (3.4m)	10 (3.0m)
48" (1200mm)	29 (8.8m)	14 (4.3m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	10 (3.0m)
60" (1500mm)	29 (8.8m)	14 (4.3m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	9 (2.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
7	REV. MAXIMUM COVER HEIGHTS	RWD	04/01/19	

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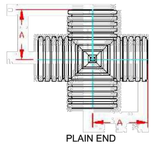
TRENCH INSTALLATION DETAIL (HP STORM)
DRAWING NUMBER: STD-101D(EP)

4640 TRUEMAN BLVD
HILLIARD, OHIO 43026
ADVANCED DRAINAGE SYSTEMS, INC.

DRAWN BY	JAB
DATE	01/29/09
SCALE	NTS
SHEET	1 OF 1

DUAL WALL FABRICATED CROSS TEE
4" - 24" DIAMETER

PART #	PIPE SIZE	A	JOINT
0430AN	4 in (100 mm)	4.9 in (125 mm)	*
0631AN	6 in (150 mm)	7.0 in (177 mm)	*
0832AN	8 in (200 mm)	8.6 in (219 mm)	*
1033AN	10 in (250 mm)	12.0 in (304 mm)	*
1234AN	12 in (300 mm)	16.3 in (415 mm)	*
1535AN	15 in (375 mm)	19.4 in (494 mm)	*
1836AN	18 in (450 mm)	24.1 in (613 mm)	*
2437AN	24 in (600 mm)	29.9 in (760 mm)	*



PLAIN END

* = PLAIN END

NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY

ADVANCED DRAINAGE SYSTEMS, INC.

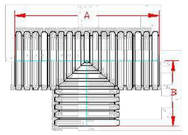
DRAWING #:	2450
DRAWN BY:	JCB 04.06.06
APPROVED BY:	JCB 06.26.07
REVISIONS:	NJP 06.14.07

DUAL WALL FABRICATED TEES
4" - 30" DIAMETER

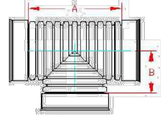
	PART #	PIPE SIZE	A	B	JOINT
**	0460AN	4 in (100 mm)	12.8 in (324 mm)	6.2 in (158 mm)	*
**	0661AN	6 in (150 mm)	16.5 in (419 mm)	8.1 in (207 mm)	*
**	0862AN	8 in (200 mm)	21.0 in (533 mm)	10.6 in (268 mm)	*
**	1063AN	10 in (250 mm)	26.0 in (660 mm)	12.6 in (320 mm)	*
	1264AN	12 in (300 mm)	30.7 in (780 mm)	15.4 in (390 mm)	*
	1264AN85B	12 in (300 mm)	21.1 in (536 mm)	10.6 in (268 mm)	ST
	1264AN65B	12 in (300 mm)	21.1 in (536 mm)	10.6 in (268 mm)	WT
	1565AN	15 in (375 mm)	38.9 in (987 mm)	19.4 in (494 mm)	*
	1565AN85B	15 in (375 mm)	23.3 in (592 mm)	11.7 in (296 mm)	ST
	1565AN65B	15 in (375 mm)	23.3 in (592 mm)	11.7 in (296 mm)	WT
	1866AN	18 in (450 mm)	42.9 in (1089 mm)	21.4 in (545 mm)	*
	1866AN85B	18 in (450 mm)	26.8 in (681 mm)	13.4 in (340 mm)	ST
	1866AN65B	18 in (450 mm)	26.8 in (681 mm)	13.4 in (340 mm)	WT
	2467AN	24 in (600 mm)	50.4 in (1280 mm)	25.2 in (640 mm)	*
	2467AN85B	24 in (600 mm)	37.8 in (960 mm)	18.9 in (480 mm)	ST
	2467AN65B	24 in (600 mm)	37.8 in (960 mm)	18.9 in (480 mm)	WT

* = PLAIN END
ST = SOIL TIGHT
WT = WATER TIGHT
** LIMITED AVAILABILITY. PLEASE SEE INJECTION MOLDED FITTING SECTION FOR OTHER AVAILABLE FITTINGS

NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY



PLAIN END



ST & WT (INCLUDES 3 GASKETS)

ADVANCED DRAINAGE SYSTEMS, INC.

DRAWING #:	2400
DRAWN BY:	JCB 05.23.07
APPROVED BY:	JCB 06.26.07
REVISIONS:	TJR 2/2/2010

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
09/02/22

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	
	11/08/22	THIRD SUBMITTAL	

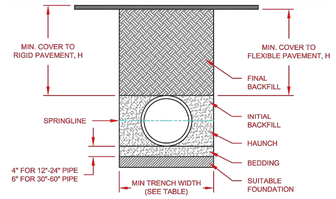
PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 11/08/22

NYLOPLAST DETAILS

C 720

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 DETAIL SHEETS.DWG 11/30/2022 8:46 AM PHIL MINTON

HP STORM TRENCH INSTALLATION DETAIL



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE; 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
7. FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04.

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TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1822mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2436mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
24" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, ft

	CLASS I		CLASS II			CLASS III		CLASS IV
PIPE DIA	COMPACTED	DUMPED	95%	90%	85%	95%	90%	95%
12" (300mm)	41 (12.5m)	21 (6.4m)	28 (8.5m)	21 (6.4m)	16 (4.9m)	20 (6.1m)	16 (4.9m)	16 (4.9m)
15" (375mm)	42 (12.8m)	21 (6.4m)	29 (8.8m)	21 (6.4m)	16 (4.9m)	21 (6.4m)	16 (4.9m)	16 (4.9m)
18" (450mm)	44 (13.4m)	21 (6.4m)	30 (9.1m)	21 (6.4m)	16 (4.9m)	18 (5.5m)	14 (4.3m)	14 (4.3m)
24" (600mm)	30 (9.1m)	15 (4.6m)	21 (6.4m)	15 (4.6m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
30" (750mm)	39 (11.9m)	19 (5.8m)	27 (8.2m)	19 (5.8m)	14 (4.3m)	19 (5.8m)	15 (4.6m)	14 (4.3m)
36" (900mm)	28 (8.5m)	28 (8.5m)	20 (6.1m)	14 (4.3m)	10 (3.0m)	14 (4.3m)	11 (3.4m)	10 (3.0m)
42" (1050mm)	30 (9.1m)	14 (4.3m)	21 (6.4m)	14 (4.3m)	10 (3.0m)	15 (4.6m)	11 (3.4m)	10 (3.0m)
48" (1200mm)	29 (8.8m)	14 (4.3m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	10 (3.0m)
60" (1500mm)	29 (8.8m)	14 (4.3m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	9 (2.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

REV.	DESCRIPTION	BY	MM/DD/YY	CHKD
7	REV. MAXIMUM COVER HEIGHTS	RWD	04/01/19	

TRENCH INSTALLATION DETAIL (HP STORM)

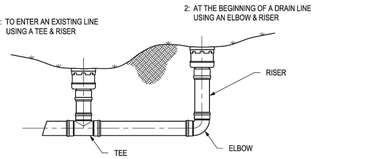
DRAWING NUMBER: STD-101D(EP)

ADS — ADVANCED DRAINAGE SYSTEMS, INC. — 4640 TRUEMAN BLVD HILLIARD, OHIO 43026

DRAWN BY: JAB
DATE: 01/29/09
SHEET NO.
SCALE: NTS
SHEET: 1 OF 1

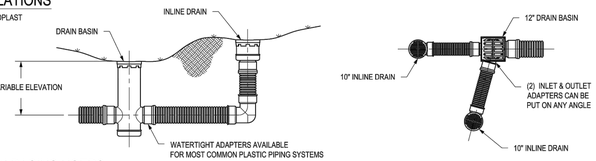
WHEN ARE INLINE DRAINS USED?

2708AG __ X
2710AG __ X
2712AG __ X
2715AG __ X
2718AG __ X
2724AG __ X
2730AG __ X



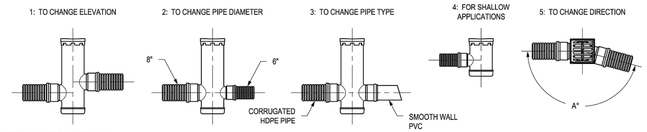
TYPICAL INSTALLATIONS

TYPICAL INSTALLATION OF NYLOPLAST DRAIN BASIN AND INLINE DRAIN



WHEN ARE DRAIN BASINS USED?

2808AG __ X
2810AG __ X
2812AG __ X
2815AG __ X
2818AG __ X
2824AG __ X
2830AG __ X
2836AG __ X



1 - STRUCTURES & ADAPTERS AVAILABLE IN SIZES 8" - 36"
2 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°, TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS SEE DRAWING NO. 7001-110-005
4 - REDUCING CONES DOWN TO 30" DIAMETER WILL BE REQUIRED FOR 36" DRAIN BASINS.

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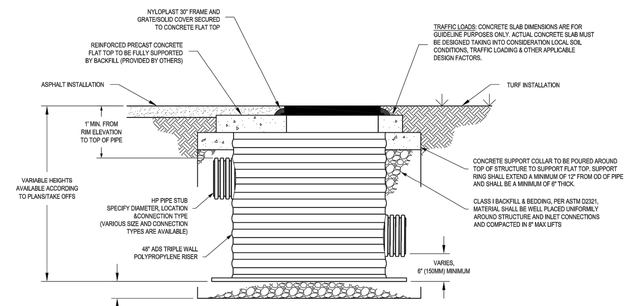
DRAWN BY: AWA
DATE: 8-10-00
REVISED BY: NMH
DATE: 11-3-18
DWG SIZE: A
MATERIAL
PROJECT NO./NAME
SCALE: 1:40 SHEET: 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-3443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE
8 IN - 36 IN TYPICAL INSTALLATION OPTIONS

DWG NO. 7001-110-042 REV E

48 IN HP MANHOLE INSTALLATION DETAIL FOR SHALLOW BURIAL DEPTHS



NYLOPLAST CASTING OPTIONS

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
24" PEDES TRIAN	MEETS H-10	2499CGP	7001-110-216
24" STANDARD	MEETS H-20	2499CGS	7001-110-217
24" SOLID COVER	MEETS H-20	2499CGC	7001-110-218
30" PEDES TRIAN	MEETS H-20	3099CGP	7001-110-220
30" STANDARD	MEETS H-20	3099CGS	7001-110-221
30" SOLID COVER	MEETS H-20	3099CGC	7001-110-222

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - 48" HP MANHOLES ARE TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
4 - ADAPTERS CAN BE MOUNTED ON ANGLES 0° TO 359° . TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-036
5 - PRECAST CONCRETE FLAT TOP AND SUPPORT COLLAR SHALL BE DESIGNED BY THE SITE ENGINEER AND IS TO BE PROVIDED BY LOCAL PRECAST MANUFACTURER.

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DRAWN BY: JJC
DATE: 6-20-17
APPD BY: JJC
DATE: 6-20-17
DWG SIZE: A
MATERIAL: -
PROJECT NO./NAME: -
SCALE: 1:25 SHEET: 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-3443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE
48 IN HP MH INSTALLATION DETAIL FOR SHALLOW BURIAL DEPTHS

DWG NO. 7009-110-024 REV B

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
09/02/22

TAKE 5 CAR WASH

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 11/08/22

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	
	11/08/22	THIRD SUBMITTAL	

TAKE FIVE EXPRESS CAR WASH

891 N. MAIN ST.,
SPANISH FORK, UT 84660

NYLOPLAST DETAILS

C 730

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 DETAIL SHEETS.DWG 11/30/2022 8:46 AM PHIL MINTON

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

ADS Advanced Drainage Systems, Inc.

ADS SiteAssist® FOR STORMTECH® INSTALLATION INSTRUCTIONS VISIT OUR APP

TAKE 5

SPANISH FORK, UT

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/% THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

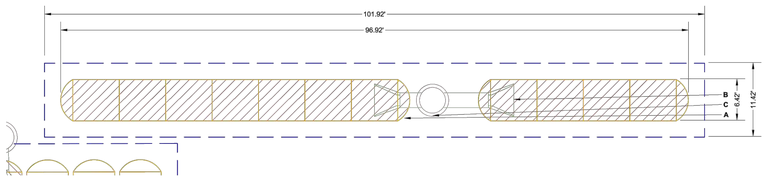
CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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PROPOSED LAYOUT: NORTH		PROPOSED ELEVATIONS: NORTH	
11	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	4569.75
4	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	4563.75
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	4563.25
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	4563.25
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	4563.25
3321	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	4562.75
		TOP OF MC-3500 CHAMBER:	4561.75
		24" ISOLATOR ROW PLUS INVERT:	4558.17
		BOTTOM OF MC-3500 CHAMBER:	4558.00
		BOTTOM OF STONE:	4557.25
1164	SYSTEM AREA (SF)		
226.7	SYSTEM PERIMETER (ft)		

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
	B	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MC350024RAMP (TYP 2 PLACES)		
FLAMP	C	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		8.5 CFS IN
CONCRETE STRUCTURE				



ISOLATOR ROW PLUS (SEE DETAIL/TYP 2 PLACES)

NO WOVEN GEOTEXTILE

BED LIMITS

NOTES
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

TAKE 5 | SPANISH FORK, UT | DRAWN: WA | CHECKED: N/A | DATE: | PROJECT #:

DATE	DRW	CHK	DESCRIPTION

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS AND IS THE PROPERTY OF ADS. IT IS THE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCTS DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND AGENCY REQUIREMENTS.

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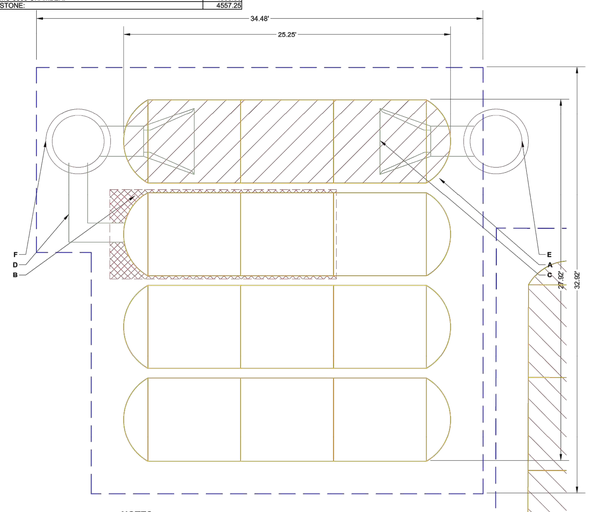
SCALE: 0 10' 20'

SHEET 2 OF 6

PROPOSED LAYOUT: SOUTH		PROPOSED ELEVATIONS: SOUTH	
12	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	4569.75
8	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	4563.75
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	4563.25
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	4563.25
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	4563.25
3187	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	4562.75
		TOP OF MC-3500 CHAMBER:	4561.75
		15" x 15" TOP MANIFOLD INVERT:	4559.95
		24" ISOLATOR ROW PLUS INVERT:	4558.17
		24" ISOLATOR ROW PLUS INVERT:	4558.17
		BOTTOM OF MC-3500 CHAMBER:	4558.00
		BOTTOM OF STONE:	4557.25
1056	SYSTEM AREA (SF)		
134.8	SYSTEM PERIMETER (ft)		

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
PREFABRICATED END CAP	B	15" TOP CORED END CAP, PART#: MC3500IEPP15T / TYP OF ALL 15" TOP CONNECTIONS	23.39"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MC350024RAMP (TYP 2 PLACES)		
MANIFOLD	D	15" x 15" TOP MANIFOLD. ADS N-12	23.39"	
CONCRETE STRUCTURE	E	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		
CONCRETE STRUCTURE	F	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		3.5 CFS IN



ISOLATOR ROW PLUS (SEE DETAIL)

PLACE MINIMUM 17.50' OF ADSPLUS175 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

TAKE 5 | SPANISH FORK, UT | DRAWN: WA | CHECKED: N/A | DATE: | PROJECT #:

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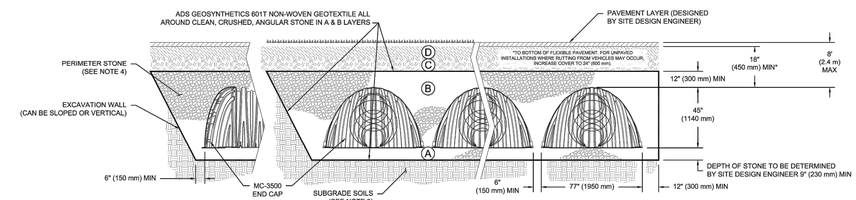
SCALE: 0 10' 20'

SHEET 3 OF 6

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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SHEET 4 OF 6

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH

09/02/22

TAKE 5 CAR WASH

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	
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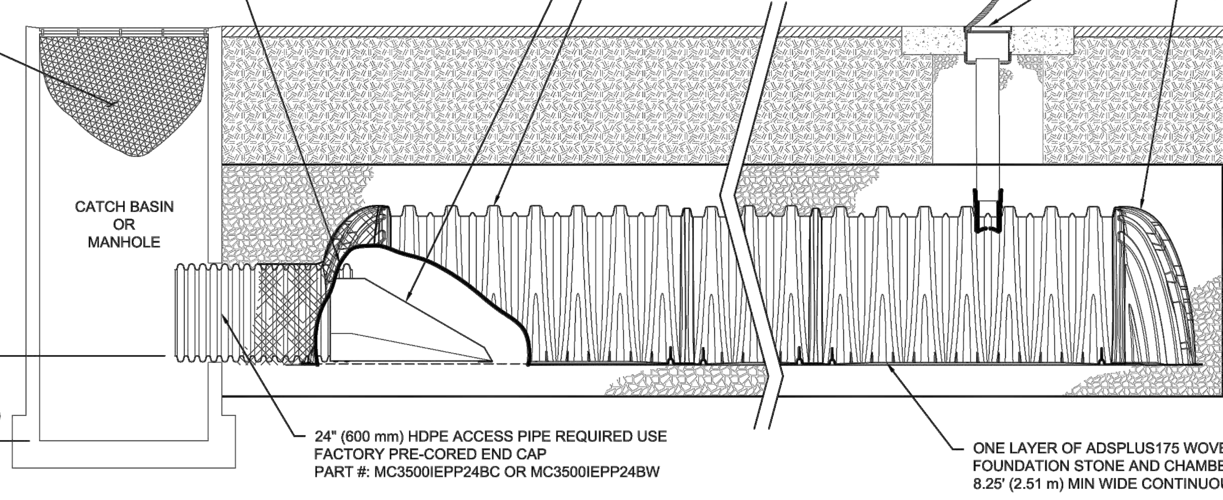
PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 11/08/22

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

ADS SYSTEM DETAILS

C 740

J:_TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 DETAIL SHEETS.DWG 11/30/2022 8:46 AM PHIL MINTON



MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

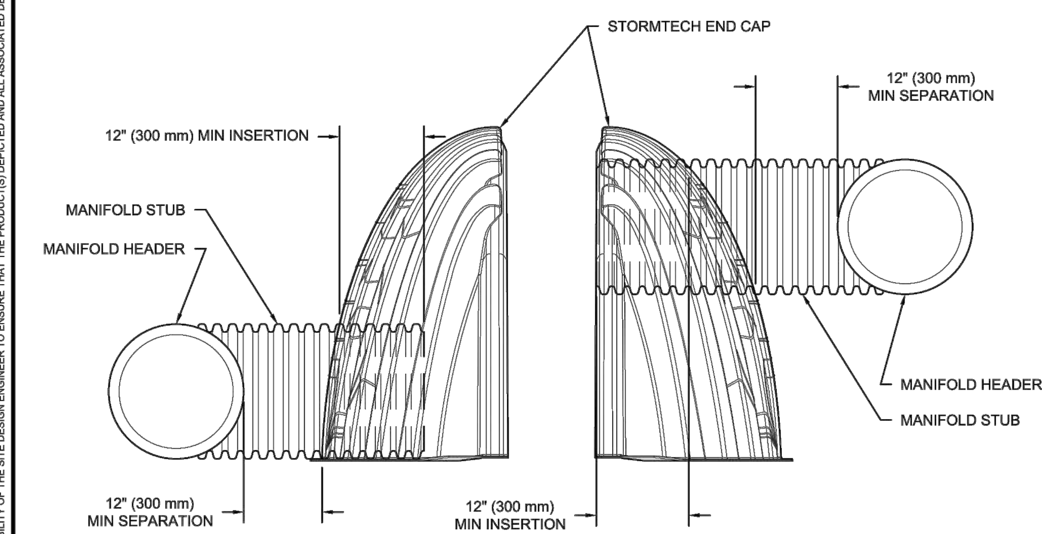
STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

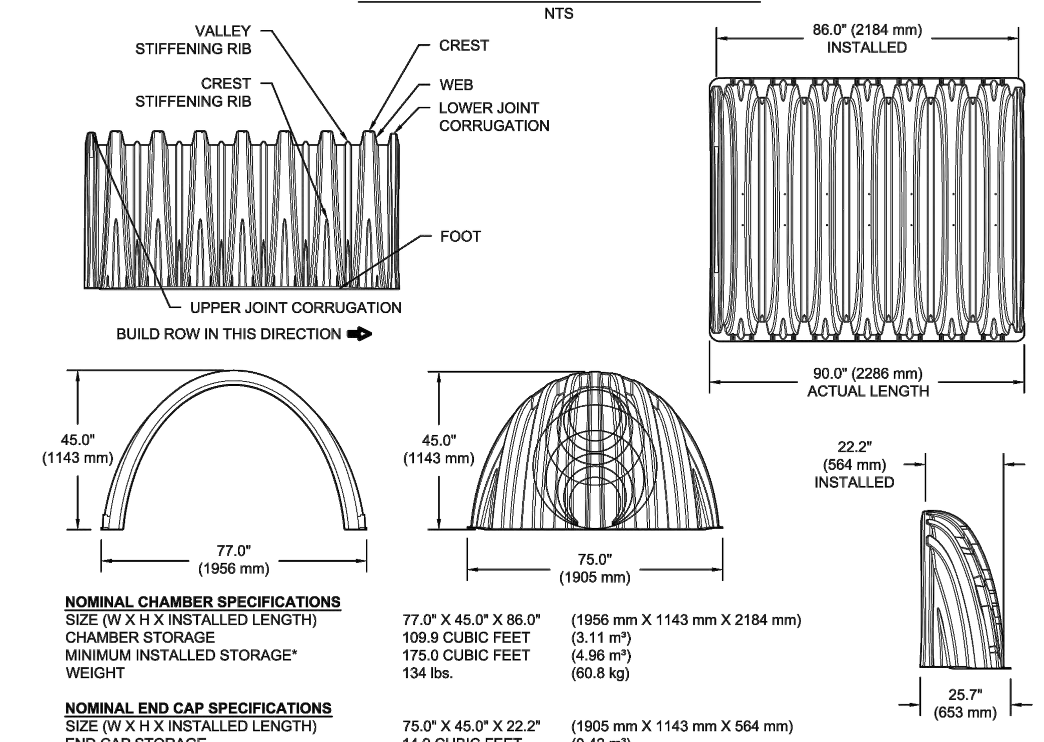
TAKE 5
SPANISH FORK, UT
DATE: | DRAWN: WA
PROJECT #: | CHECKED: N/A
DATE | DRW | CHK | DESCRIPTION
StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM
ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.
SHEET 5 OF 6

MC-SERIES END CAP INSERTION DETAIL
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

MC-3500 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

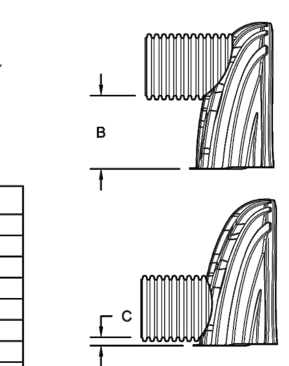
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

TAKE 5
SPANISH FORK, UT
DATE: | DRAWN: WA
PROJECT #: | CHECKED: N/A
DATE | DRW | CHK | DESCRIPTION
StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM
ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.
SHEET 6 OF 6

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112

John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH
09/02/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH

891 N. MAIN ST.,
SPANISH FORK, UT 84660

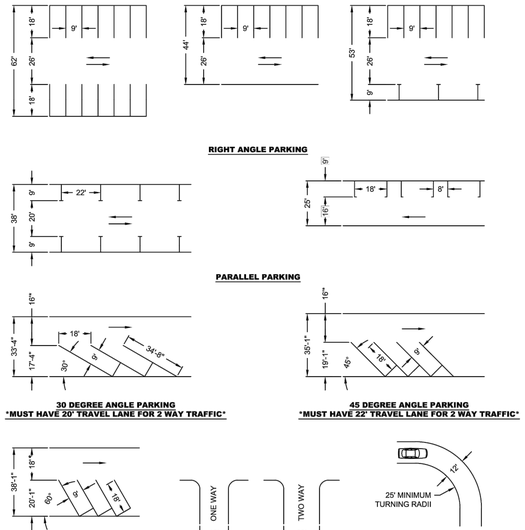
REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	
	11/08/22	THIRD SUBMITTAL	

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 11/08/22

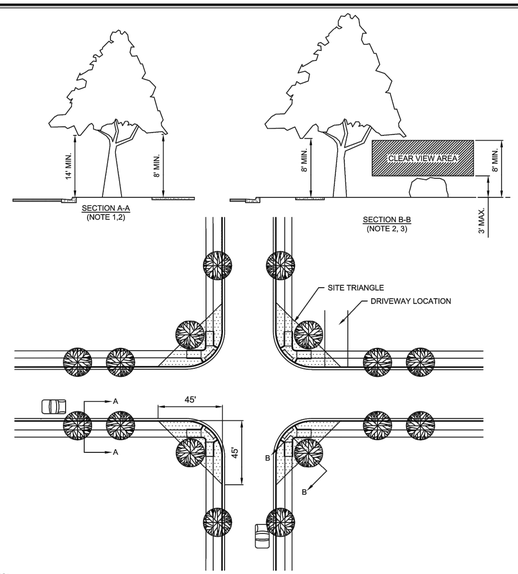
ADS SYSTEM DETAILS

C 750

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 DETAIL SHEETS.DWG 11/30/2022 8:46 AM PHIL MINTON

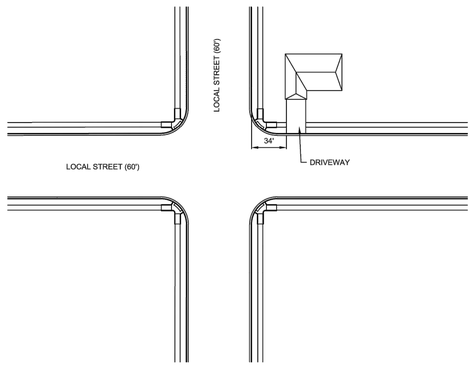


SPANISH FORK CITY ENGINEERING	SPANISH FORK CITY 40 SOUTH MAIN STREET SPANISH FORK, UT 84660 (801) 804-4550	STANDARD DRAWING PARKING LOTS	DRAWN: JLR DESIGN: MHC REVISION: DATE: 6/19/2018
SCALE NONE STANDARD G-110			



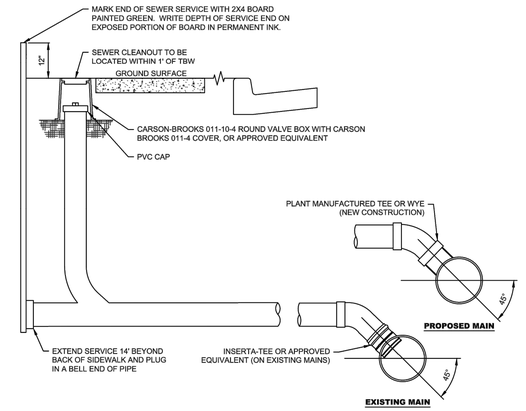
NOTES:
1. TREES IN PARK STRIPS MUST BE PRUNED TO A MINIMUM HEIGHT OF 14' ABOVE THE ROADWAY.
2. RESIDENTS ON CORNER LOTS ARE REQUIRED TO HAVE AN UNOBSTRUCTED SITE TRIANGLE FOR 60' FROM THE INTERSECTION OF THE EXTENSION OF BACK OF CURB IN BOTH DIRECTIONS. NO STRUCTURES OR VEGETATION ON THIS TRIANGLE SHALL BE OVER 3' IN HEIGHT.
3. TREES ON PRIVATE PROPERTY IN THE SITE TRIANGLE OR OVERHANGING THE SIDEWALK MUST BE PRUNED TO A MINIMUM HEIGHT OF 8' ABOVE THE SIDEWALK.
4. TRAFFIC SIGNS AND STREET SIGNS SHALL NOT BE OBSTRUCTED BY VEGETATION FOR AT LEAST 100' FROM APPROACHING VIEW OF VEHICLE OPERATOR.
5. TREES SHALL NOT BE PLANTED WITHIN 10' OF A WATER METER AND FIRE HYDRANT AND WITHIN 20' OF STREET LIGHTS
6. REFER TO AASHTO CHAPTER 3 FOR STREETS WITH SPEEDS HIGHER THAN 25 MPH
7. REFER TO TITLE XV FOR DRIVEWAY CLEAR VIEW REQUIREMENTS

SPANISH FORK ENGINEERING	SPANISH FORK CITY 40 SOUTH MAIN STREET SPANISH FORK, UT 84660 (801) 804-4550	STANDARD DRAWING CLEAR SIGHT TRIANGLE	DRAWN: JLR DESIGN: MHC REVISION: DATE: 10/5/2020
SCALE NONE STANDARD G-111			



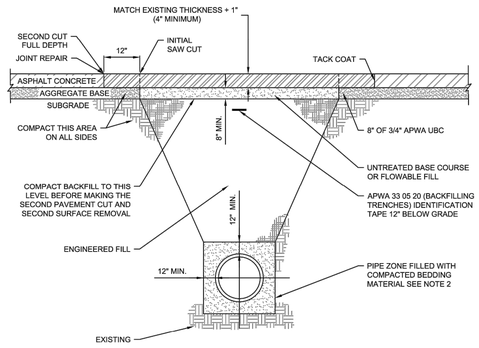
NOTES:
1. MEASUREMENTS ARE FROM THE TOP BACK OF CURB (TBC) TO THE EDGE OF DRIVEWAY FOR ACCESS.

SPANISH FORK ENGINEERING	SPANISH FORK CITY 40 SOUTH MAIN STREET SPANISH FORK, UT 84660 (801) 804-4550	STANDARD DRAWING DRIVEWAY AND INTERSECTION LOCATION LOCAL / LOCAL	DRAWN: JLR DESIGN: MHC REVISION: DATE: 6/19/2018
SCALE NONE STANDARD ST-522			



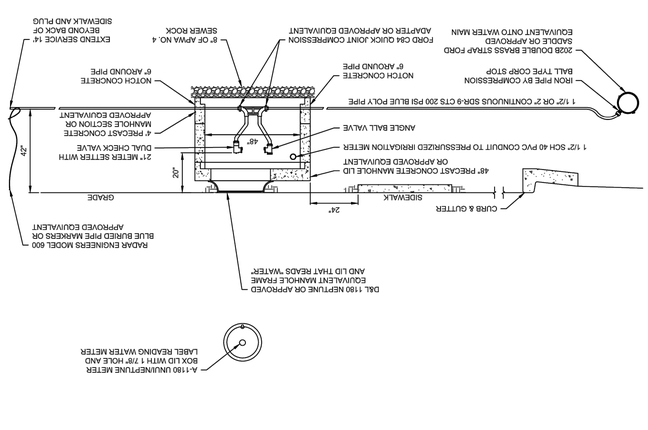
NOTES:
1. THE MINIMUM SLOPE IS 2% FOR A 4" LATERAL AND 1% FOR A 6" LATERAL.
2. SEWER LATERALS SHALL HAVE A MINIMUM OF 42" OF COVER FROM FINISH GRADE AT PROPERTY LINE AND 36" AT PLUG.
3. INSERTA-TEE MAY ONLY BE USED WHEN APPROVED BY CITY ENGINEER.

SPANISH FORK ENGINEERING	SPANISH FORK CITY 40 SOUTH MAIN STREET SPANISH FORK, UT 84660 (801) 804-4550	STANDARD DRAWING SEWER SERVICE	DRAWN: JLR DESIGN: CJP CHECK: CMT DATE: 6/15/18
SCALE: NONE STANDARD SS-304			



NOTES:
1. PAVEMENT CUTS SHALL BE A MINIMUM OF 3' X 3' AND ALSO BE MADE 12 INCHES OUTSIDE THE EDGE OF TRENCH FOR TRENCHES DEEPER THAN 4 FEET.
2. BEDDING MATERIAL SHALL EXTEND A MINIMUM OF 6" BELOW THE PIPE. BEDDING MATERIAL PER 39.35.040 B.
3. ASPHALT SHALL BE CUT TO THE SPECIFIED WIDTH DURING PIPELINE CONSTRUCTION AND SUBSURFACE RESTORATION. THE FINAL SAW-CUT SHALL BE AN ADDITIONAL 12" WIDER THAN THE EXISTING TRENCH ON EACH SIDE, REMOVING THE ASPHALT AND PROCEEDING WITH THE REMAINDER OF THE RESTORATION.
4. USE APWA NO. 4 SEWER ROCK FOR GRAVITY PIPE BEDDING MATERIAL. USE SAND AS A BEDDING MATERIAL FOR PRESSURE PIPE AND ELECTRICAL AND COMMUNICATION CONDUIT. BEDDING SAND MUST COMPACT SUFFICIENTLY TO SUPPORT THE PIPE AND SHALL MEET THE CITY'S GRADATION.

SPANISH FORK ENGINEERING	SPANISH FORK CITY 40 SOUTH MAIN STREET SPANISH FORK, UT 84660 (801) 804-4550	STANDARD DRAWING ASPHALT RESTORATION DEEP EXCAVATION & UTILITY POTHOLE REPAIR	DRAWN: JLR DESIGN: MHC REVISION: DATE: 10/5/2020
SCALE NONE STANDARD G-101			



JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
09/02/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	
	11/08/22	THIRD SUBMITTAL	

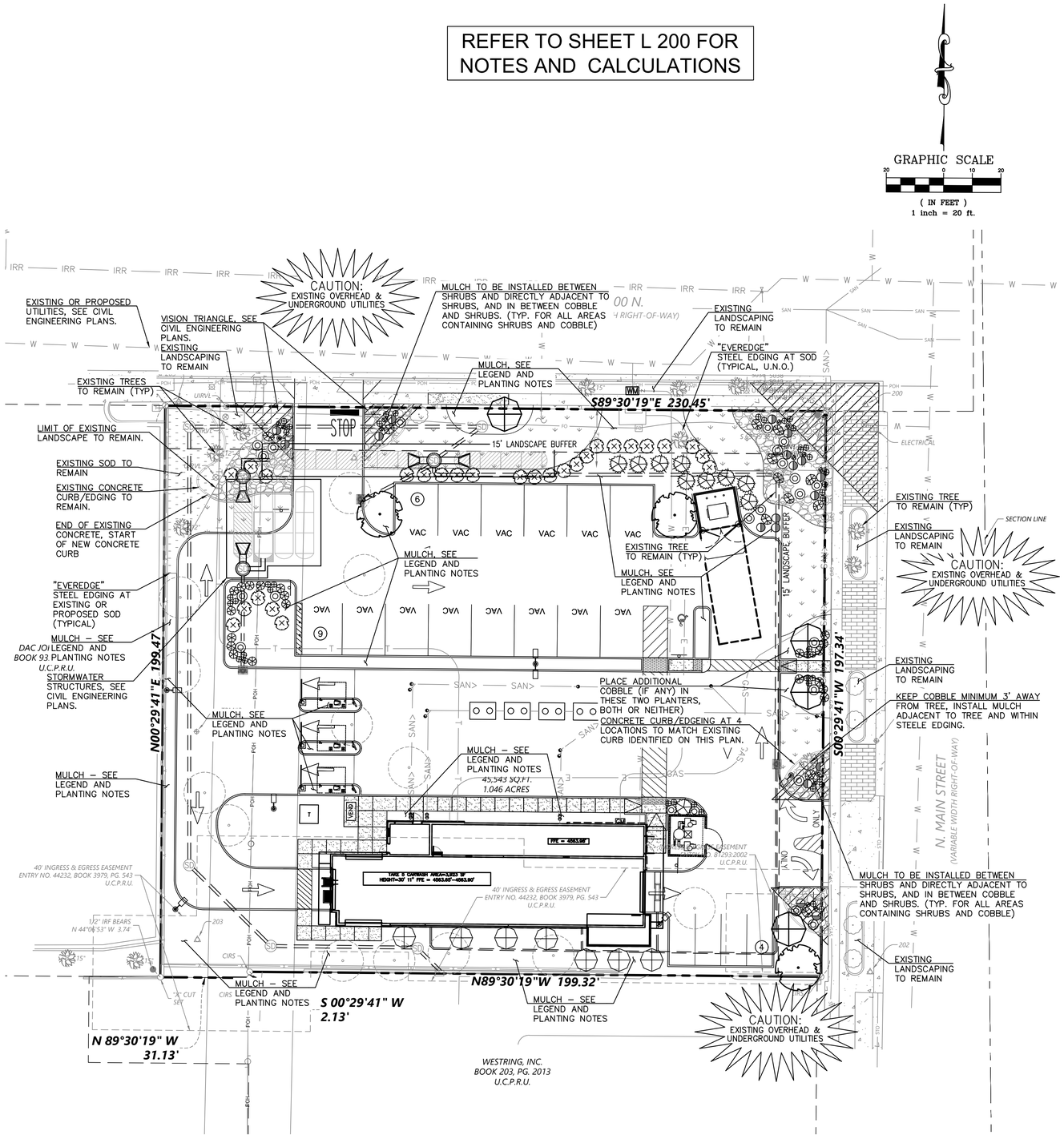
PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 11/08/22

CITY DETAILS

C 760

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REFER TO SHEET L 200 FOR NOTES AND CALCULATIONS



LEGEND:

SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	FLOWER COLOR	QUANTITY
EXISTING TREES – SIZE AND LOCATION SHOWN PER SURVEY AND REMOTE OBSERVATION					
10" OR	EXISTING TREES TO REMAIN				16 (9 IN PARK STRIP)
	EXISTING TREES TO BE REMOVED				13
SHADE/DECIDUOUS TREES – MINIMUM 2" CALIPER PER INDUSTRY STANDARDS, B&B)					
	CERCIS CANADENSIS 'MERLOT'	EASTERN REDBUD	–	PINK	4
	PYRUS CALLERYANA 'CHANTICLEER'	CALLERYANA ORNAMENTAL PEAR	–	WHITE	3
SHRUBS AND PERENNIALS (PER AGENCY – MINIMUM 1 GALLON SIZE AT INSTALLATION, SEE NOTES BELOW)					
	AGASTACHE 'PURPLE HAZE'	PURPLE HAZE HYSSOP	–	PURPLE	52
	BUXUS 'WINTER GEM'	BOXWOOD	–	INSIGNIFICANT	27
	EUONYMUS ALATUS 'ODOM'	LITTLE MOSES BURNING BUSH	–	INSIGNIFICANT	20
	PHYSOCARPUS OPULIFOLIOS 'MONLO'	DIABLO NINEBARK	–	PINKISH–WHITE	10
	PINUS MUGO 'SLOWMOUND'	SLOWMOUND MUGO PINE	–	–	25
	POTENTILLA FRUTICOSA 'GOLD STAR'	GOLD STAR POTENTILLA	–	YELLOW	20
	VIBURNUM OPULUS 'ROSEUM'	SNOWBALL VIBURNUM	–	WHITE	7
SOD, GROUND GOVER, PERENNIALS AND MULCH					
	BOULDERS/USE EXISTING (MAXIMUM 3' HIGH IN VISION TRIANGLE)		–	–	PER PLAN
	COBBLE, USE EXISTING (MATCH IF NECESSARY)		–	–	PER PLAN
	75% KENTUCKY BLUEGRASS OR PERENNIAL RYEGRASS (MATCH EXISTING) 25% TALL FESCUE				3061± SF SOD (NOT ACCOUNTING FOR SLOPE OR EXISTING GRASS)
	EXISTING LANDSCAPING TO REMAIN (ONLY ON-SITE HATCHED)				
	HARDWOOD NATURAL MULCH OR CLIENT AND AGENCY APPROVED MULCH, 3" DEPTH(PER AGENCY) W/ WEED BARRIER FABRIC				BELOW ALL PLANTING EXCEPT WHERE GROUNDOVER IS PROPOSED.
	EVEREDGE STEEL EDGING (GARDEN RING WHERE NOTED)				

GENERAL NOTES:

A. TREES TO BE INSTALLED MINIMUM 4'–0" AWAY FROM PAVEMENT, GREATER IF SHOWN AS SUCH ON PLANS.

B. NO TREE MAY BE PLANTED WITHIN THIRTY FEET OF INTERSECTING SIDEWALK CORNERS.

C. NO TREE MAY BE PLANTED WITHIN TEN FEET OF ANY WATER METER, ELECTRIC METER, JUNCTION BOX, TRANSFORMER, OTHER ELECTRICAL FACILITY, OR UTILITY POLE.

D. IF EXISTING TREES TO REMAIN CANNOT BE SAVED, CONTACT JMCIVIL PRIOR TO START OF CONSTRUCTION. REFER TO PLANTING NOTES FOR TREE PRESERVATION REFERENCE IN ZONING CODE. ONE (1) OF THE (3) EXISTING TREES IN THE NORTHWEST CORNER OF SITE CAN BE REMOVED AND STILL MEET MINIMUM STREET FRONTAGE TREE REQUIREMENTS ALONG W. 900 N.

E. PROPOSED SHRUBS IN VISION TRIANGLE HAVE A MAXIMUM HEIGHT OF 3' (THREE FEET).

F. THERE ARE NOT ANY TREES PROPOSED WITHIN THE VISION TRIANGLES OF EACH DRIVEWAY. ANY PORTION OF TREE THAT ENCROACHES INTO SAID VISION TRIANGLE SHALL BE TRIMMED UP TO 8' ABOVE GRADE PER SPANISH FORK CITY ORDINANCE.

G. A FULLY AUTOMATIC IRRIGATION SYSTEM, PLANS OF WHICH WILL BE PROVIDED TO AGENCY PRIOR TO START OF CONSTRUCTION, OR AT TIME REQUIRED BY AGENCY.

811 Know what's **below.** **Call** before you dig.

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER No. 10527678-2202 JOHN T. MEASELS STATE OF UTAH
12/05/22

TAKE 5 CAR WASH

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION	NAME
	07/21/22	INITIAL SUBMITTAL	JV
	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	POM

PROJECT NO: JM–TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

PRELIMINARY LANTING PLAN

L 100

J:\TAKE FIVE OIL\JM–TF021032 – SPANISH FORK, UT_CURRENT DRAWINGS\JM–TF021032 LANDSCAPE SPANISH FORK, UT.DWG 12/6/2022 12:06 PM GILBERT BEAN

LANDSCAPE CALCULATIONS :

CALCULATIONS ARE BASED ON SPANISH FORK CITY MUNICIPAL CODE.

SITE IS ZONED C-2 GENERAL COMMERCIAL

SECTION 15.4.16.130 – LANDSCAPING BUFFERING WALLS, AND FENCES

D. COMMERCIAL USES:

1) MINIMUM OF 15% ON-SITE LANDSCAPING OF TOTAL SITE AREA

TOTAL SITE/LOT AREA = 45,543 S.F.

LANDSCAPE AREA;

REQUIRED: 6832 S.F
(45,543 S.F. X 0.15 (15%) = 6831.45 S.F.

PERVIOUS AREA PROVIDED: 15307.96 S.F.(34.0%)

LANDSCAPED AREA PROVIDED: 8,606 S.F.(19%)

2) PARKING LOTS SHALL INCLUDE PLANTER AREAS WITHIN THE PARKING LOT, WITH A MINIMUM OF 108 SQUARE FEET OF PLANTER AREA FOR EVERY 10 PARKING SPACES. REQUIRED PLANTER AREAS SHALL BE INDIVIDUAL ISLANDS OF LANDSCAPING AND SHALL BE AT LEAST SIX (6) FEET WIDE. REQUIRED PLANTER AREAS SHALL INCLUDE SHADE TREES, AS IDENTIFIED ON THE CITY'S APPROVED LIST OF SHADE TREES, WITH A MAXIMUM SPACING OF 30 FEET.

LANDSCAPE AREAS BASED ON PARKING SPACE QUANTITY;

GIVEN: 19 PARKING SPACES

REQUIRED: (2) INDIVIDUAL 108 S.F. LANDSCAPE ISLANDS, 6' MIN. WIDE PLANTER ISLANDS REQUIRED WITH ONE SHADE TREE EACH.

PROPOSED: (2) TREES, ONE IN EACH OF TWO INTERIOR LANDSCAPE AREAS THAT MEET THE MINIMUM WIDTH AND SQUARE FOOT REQUIREMENTS.

3) MINIMUM OF 15-FOOT-WIDE PLANTER AREA ADJACENT TO ALL PUBLIC STREETS, WHICH SHALL INCLUDE ONE SHADE TREE (FROM CITY LIST) FOR EACH 30 FEET OF FRONTAGE ALONG ALL PUBLIC STREETS. SHADE TREES MUST BE PLANTED WITHIN 30 FEET OF THE PUBLIC STREET CURB; WHEREVER POSSIBLE, 50% OF THE REQUIRED SHADE TREES MUST BE PLANTED IN THE PARK STRIP.

W. 900 N. 216.45 LF (230.45' – 24' DRIVEWAY)
207 LF / 30 = 6.9 = 7 TREES

REQUIRED: 8 TREES TOTAL
4 TREES WITHIN PARK STRIP (WHEREVER POSSIBLE)
PROVIDED: 8 TREES
(1 NEW, 4 EXISTING ON-SITE, 3 EXISTING IN PARK STRIP)

N. MAIN ST. 167.6 LF (197.34' – 29.74' DRIVEWAY)
168 LF / 30 = 5.6 = 6 TREES

REQUIRED: 6 TREES TOTAL
3 TREES WITHIN PARK STRIP (WHEREVER POSSIBLE)
PROVIDED: 9 TREES
(2 NEW, 1 EXISTING ON-SITE, 6 EXISTING IN PARK STRIP)

4) SITE DOES NOT ABUT RESIDENTIAL (PER CITY MAPS).

5) THE TOTAL NUMBER OF REQUIRED TREES AND SHRUBS FOR EVERY 1,000 SQUARE FEET OF REQUIRED LANDSCAPING SHALL EQUAL TWO (2) TREES AND 10 SHRUBS.

GIVEN: 6832 SF (REQUIRED LANDSCAPE)

MULTIPLYING FACTOR: 6832 SF/1000 = 6.8 = 7

REQUIRED: 14 TREES (7 X 2)
70 SHRUBS (7 X 10)

PROVIDED: 14 TREES (7 NEW, 7 EXISTING ON-SITE)
70+ SHRUBS

6) NOT APPLICABLE.

7) SEE PLANTING NOTES.

8) NO LESS THAN 30% OF THE REQUIRED LANDSCAPING SHALL BE IRRIGATED TURF GRASS. 45% OF THE REQUIRED LANDSCAPING IS SOD.

PLANTING NOTES:

A. OVERALL DESIGN TAKES INTO ACCOUNT SPANISH FORK CITY MUNICIPAL CODE, INCLUDING 12.08 AND 15.4.16.

B. TREES SHOWN ON THESE PLANS ARE PER SPANISH FORK CITY SHADE TREE LIST.

C. SHRUB AND GROUNDCOVER TYPES SHOWN WERE SELECTED FROM LOCAL NURSERIES, THE OUTDOOR GARDEN AND CRESTWOOD GARDENS SOME OF WHICH ARE FOUND IN OGDEN BOTANICAL GARDENS PLANT LIST.

D. PLANT MATERIAL INSTALLATION SIZES PER PLANTING PLAN.

E. CONTRACTOR SHALL REFER TO MUNICIPAL CODE FOR ANY INSTALLATION REQUIREMENTS, ALONG WITH IRRIGATION CLOCK RUN TIME. PER CITY MUNICIPAL CODE "IN ORDER TO ENSURE LANDSCAPING REQUIREMENTS ARE MET AND CITY UTILITIES ARE NOT DAMAGED, SPANISH FORK CITY SHALL REQUIRE APPLICANTS TO PROVIDE A DEPOSIT WITH THE CONSTRUCTION OF EACH NON-RESIDENTIAL PROJECT VALUED AT $50,000 OR MORE. THE DEPOSIT AMOUNT SHALL BE DETERMINED IN THE CITY BUDGET AND WILL BE REFUNDED TO WHOMEVER PAID THE APPLICATION FEES CONTAINING THAT LINE ITEM. IF THE REQUIRED LANDSCAPING CANNOT BE INSTALLED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, A LANDSCAPING BOND WILL BE REQUIRED FOR THE ESTIMATED COST OF INSTALLING THE REQUIRED LANDSCAPING. ONCE THE LANDSCAPING IS COMPLETE AND APPROVED, THE LANDSCAPING BOND WILL BE REFUNDED TO WHOMEVER PAID IT".

F. ALL TREES SHALL BE SINGLE LEADER TRUNK, UNLESS SPECIFICALLY NOTED OTHERWISE, MUST DISPLAY A STRONG CENTRAL LEADER AND MEET STANDARD STOCK SPECIFICATIONS, AS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN CURRENT ADDITION.

G. THOUGH NO DIMENSIONS ARE SHOWN, IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN PLANTING LOCATIONS, CONFIGURATION AND SPACING AS SHOWN, MAINTAINING PLANTING DISTANCES FROM CURBS, SIDEWALKS, EXISTING AND PROPOSED BUILDINGS AND UTILITIES AS SHOWN ON PLANS.

H. SHOULD TREES OR SHRUBS NOT BE AVAILABLE IN EITHER TYPE AND/OR SIZE SPECIFIED, ***CONTRACTOR MUST CONTACT LANDSCAPE ARCHITECT FOR AN APPROVED SUBSTITUTION.***

I. SHOULD CONTRACTOR INSTALL PLANT MATERIAL THAT DOES NOT MEET TYPE, SIZE, AND/OR TYPE AS SPECIFIED, CONTRACTOR SHALL BE RESPONSIBLE FOR PLANT REPLACEMENT.

J. ALL QUANTITIES PROVIDED FOR BIDDING ASSISTANCE ONLY. CONTRACTOR TO VERIFY PLANT AND ROCK QUANTITIES, PLANS TAKE PRECEDENCE.

K. ALL UTILITY EASEMENTS SHALL BE MARKED PRIOR TO EXCAVATION, AND PARTICULAR ATTENTION PAID TO TREE PLACEMENT WITHIN AND THROUGHOUT SITE.

L. CONTRACTOR SHALL PROVIDE ROCK SAMPLES, IF SPECIFIED ON PLANS, AND OBTAIN APPROVAL FROM OWNER PRIOR TO FINAL DELIVERY OF QUARRIED MATERIALS. NO STEEL EDGING SHALL BE USED BETWEEN ROCK TYPES.

M. CONTRACTOR TO PAY CLOSE ATTENTION TO FINISH GRADES. SHOULD GRAVELED AREAS EXCEED 4:1 SLOPE, CONTRACTOR TO OBTAIN APPROVAL OF LANDSCAPE DESIGNER PRIOR TO MULCH INSTALLATION.

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12/05/22

TAKE 5 CAR WASH

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REV	DATE	DESCRIPTION	NAME
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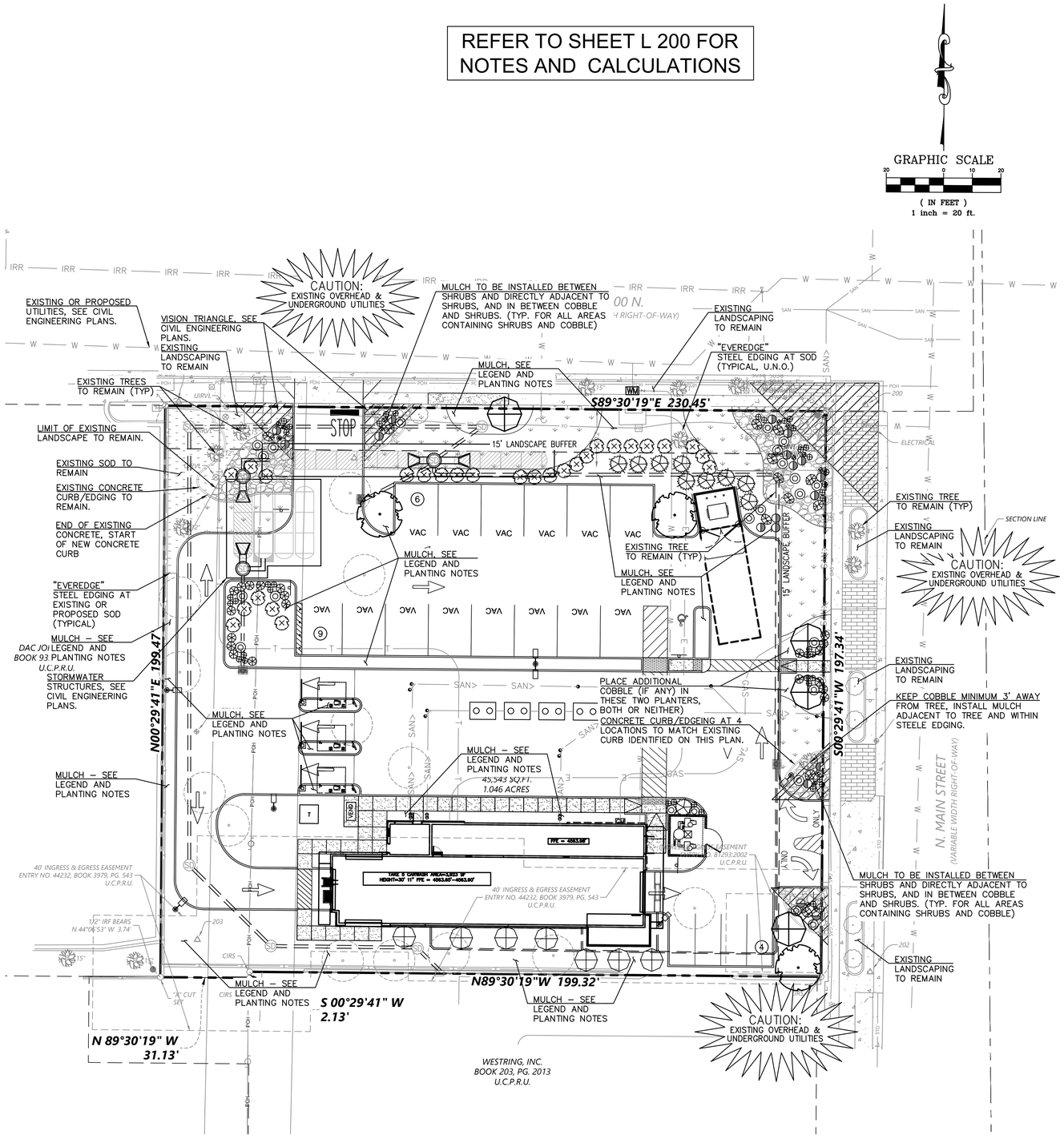
PROJECT NO: JM-TF021032
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LANDSCAPE NOTES AND PLANTING CALCS

L 200

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 LANDSCAPE SPANISH FORK, UT.DWG 12/6/2022 12:08 PM GILBERT BEAN

REFER TO SHEET L 200 FOR NOTES AND CALCULATIONS



LEGEND:

SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	FLOWER COLOR	QUANTITY
EXISTING TREES – SIZE AND LOCATION SHOWN PER SURVEY AND REMOTE OBSERVATION					
10" OR	EXISTING TREES TO REMAIN				16 (9 IN PARK STRIP)
	EXISTING TREES TO BE REMOVED				13
SHADE/DECIDUOUS TREES – MINIMUM 2" CALIPER PER INDUSTRY STANDARDS, B&B)					
	CERCIS CANADENSIS 'MERLOT'	EASTERN REDBUD	–	PINK	4
	PYRUS CALLERYANA 'CHANTICLEER'	CALLERYANA ORNAMENTAL PEAR	–	WHITE	3
SHRUBS AND PERENNIALS (PER AGENCY – MINIMUM 1 GALLON SIZE AT INSTALLATION, SEE NOTES BELOW)					
	AGASTACHE 'PURPLE HAZE'	PURPLE HAZE HYSSOP	–	PURPLE	52
	BUXUS 'WINTER GEM'	BOXWOOD	–	INSIGNIFICANT	27
	EUONYMUS ALATUS 'ODOM'	LITTLE MOSES BURNING BUSH	–	INSIGNIFICANT	20
	PHYSOCARPUS OPULIFOLIOS 'MONLO'	DIABLO NINEBARK	–	PINKISH–WHITE	10
	PINUS MUGO 'SLOWMOUND'	SLOWMOUND MUGO PINE	–	–	25
	POTENTILLA FRUTICOSA 'GOLD STAR'	GOLD STAR POTENTILLA	–	YELLOW	20
	VIBURNUM OPULUS 'ROSEUM'	SNOWBALL VIBURNUM	–	WHITE	7
SOD, GROUND GOVER, PERENNIALS AND MULCH					
	BOULDERS/USE EXISTING (MAXIMUM 3' HIGH IN VISION TRIANGLE)		–	–	PER PLAN
	COBBLE, USE EXISTING (MATCH IF NECESSARY)		–	–	PER PLAN
	75% KENTUCKY BLUEGRASS OR PERENNIAL RYEGRASS (MATCH EXISTING) 25% TALL FESCUE				3061± SF SOD (NOT ACCOUNTING FOR SLOPE OR EXISTING GRASS)
	EXISTING LANDSCAPING TO REMAIN (ONLY ON-SITE HATCHED)				
	HARDWOOD NATURAL MULCH OR CLIENT AND AGENCY APPROVED MULCH, 3" DEPTH(PER AGENCY) W/ WEED BARRIER FABRIC				BELOW ALL PLANTING EXCEPT WHERE GROUNDOVER IS PROPOSED.
	EVEREDGE STEEL EDGING (GARDEN RING WHERE NOTED)				

GENERAL NOTES:

A. TREES TO BE INSTALLED MINIMUM 4'–0" AWAY FROM PAVEMENT, GREATER IF SHOWN AS SUCH ON PLANS.

B. NO TREE MAY BE PLANTED WITHIN THIRTY FEET OF INTERSECTING SIDEWALK CORNERS.

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D. IF EXISTING TREES TO REMAIN CANNOT BE SAVED, CONTACT JMCIVIL PRIOR TO START OF CONSTRUCTION. REFER TO PLANTING NOTES FOR TREE PRESERVATION REFERENCE IN ZONING CODE. ONE (1) OF THE (3) EXISTING TREES IN THE NORTHWEST CORNER OF SITE CAN BE REMOVED AND STILL MEET MINIMUM STREET FRONTAGE TREE REQUIREMENTS ALONG W. 900 N.

E. PROPOSED SHRUBS IN VISION TRIANGLE HAVE A MAXIMUM HEIGHT OF 3' (THREE FEET).

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PROJECT NO: JM–TF021032
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PRELIMINARY LANTING PLAN

L 100

J:\TAKE FIVE OIL\JM–TF021032 – SPANISH FORK, UT_CURRENT DRAWINGS\JM–TF021032 LANDSCAPE SPANISH FORK, UT.DWG 12/6/2022 12:06 PM GILBERT BEAN

LANDSCAPE CALCULATIONS :

CALCULATIONS ARE BASED ON SPANISH FORK CITY MUNICIPAL CODE.

SITE IS ZONED C-2 GENERAL COMMERCIAL

SECTION 15.4.16.130 – LANDSCAPING BUFFERING WALLS, AND FENCES

D. COMMERCIAL USES:

1) MINIMUM OF 15% ON-SITE LANDSCAPING OF TOTAL SITE AREA

TOTAL SITE/LOT AREA = 45,543 S.F.

LANDSCAPE AREA;

REQUIRED: 6832 S.F
(45,543 S.F. X 0.15 (15%) = 6831.45 S.F.

PERVIOUS AREA PROVIDED: 15307.96 S.F.(34.0%)

LANDSCAPED AREA PROVIDED: 8,606 S.F.(19%)

2) PARKING LOTS SHALL INCLUDE PLANTER AREAS WITHIN THE PARKING LOT, WITH A MINIMUM OF 108 SQUARE FEET OF PLANTER AREA FOR EVERY 10 PARKING SPACES. REQUIRED PLANTER AREAS SHALL BE INDIVIDUAL ISLANDS OF LANDSCAPING AND SHALL BE AT LEAST SIX (6) FEET WIDE. REQUIRED PLANTER AREAS SHALL INCLUDE SHADE TREES, AS IDENTIFIED ON THE CITY'S APPROVED LIST OF SHADE TREES, WITH A MAXIMUM SPACING OF 30 FEET.

LANDSCAPE AREAS BASED ON PARKING SPACE QUANTITY;

GIVEN: 19 PARKING SPACES

REQUIRED: (2) INDIVIDUAL 108 S.F. LANDSCAPE ISLANDS, 6' MIN. WIDE PLANTER ISLANDS REQUIRED WITH ONE SHADE TREE EACH.

PROPOSED: (2) TREES, ONE IN EACH OF TWO INTERIOR LANDSCAPE AREAS THAT MEET THE MINIMUM WIDTH AND SQUARE FOOT REQUIREMENTS.

3) MINIMUM OF 15-FOOT-WIDE PLANTER AREA ADJACENT TO ALL PUBLIC STREETS, WHICH SHALL INCLUDE ONE SHADE TREE (FROM CITY LIST) FOR EACH 30 FEET OF FRONTAGE ALONG ALL PUBLIC STREETS. SHADE TREES MUST BE PLANTED WITHIN 30 FEET OF THE PUBLIC STREET CURB; WHEREVER POSSIBLE, 50% OF THE REQUIRED SHADE TREES MUST BE PLANTED IN THE PARK STRIP.

W. 900 N. 216.45 LF (230.45' – 24' DRIVEWAY)
207 LF / 30 = 6.9 = 7 TREES

REQUIRED: 8 TREES TOTAL
4 TREES WITHIN PARK STRIP (WHEREVER POSSIBLE)
PROVIDED: 8 TREES
(1 NEW, 4 EXISTING ON-SITE, 3 EXISTING IN PARK STRIP)

N. MAIN ST. 167.6 LF (197.34' – 29.74' DRIVEWAY)
168 LF / 30 = 5.6 = 6 TREES

REQUIRED: 6 TREES TOTAL
3 TREES WITHIN PARK STRIP (WHEREVER POSSIBLE)
PROVIDED: 9 TREES
(2 NEW, 1 EXISTING ON-SITE, 6 EXISTING IN PARK STRIP)

4) SITE DOES NOT ABUT RESIDENTIAL (PER CITY MAPS).

5) THE TOTAL NUMBER OF REQUIRED TREES AND SHRUBS FOR EVERY 1,000 SQUARE FEET OF REQUIRED LANDSCAPING SHALL EQUAL TWO (2) TREES AND 10 SHRUBS.

GIVEN: 6832 SF (REQUIRED LANDSCAPE)

MULTIPLYING FACTOR: 6832 SF/1000 = 6.8 = 7

REQUIRED: 14 TREES (7 X 2)
70 SHRUBS (7 X 10)

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6) NOT APPLICABLE.

7) SEE PLANTING NOTES.

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PLANTING NOTES:

A. OVERALL DESIGN TAKES INTO ACCOUNT SPANISH FORK CITY MUNICIPAL CODE, INCLUDING 12.08 AND 15.4.16.

B. TREES SHOWN ON THESE PLANS ARE PER SPANISH FORK CITY SHADE TREE LIST.

C. SHRUB AND GROUNDCOVER TYPES SHOWN WERE SELECTED FROM LOCAL NURSERIES, THE OUTDOOR GARDEN AND CRESTWOOD GARDENS SOME OF WHICH ARE FOUND IN OGDEN BOTANICAL GARDENS PLANT LIST.

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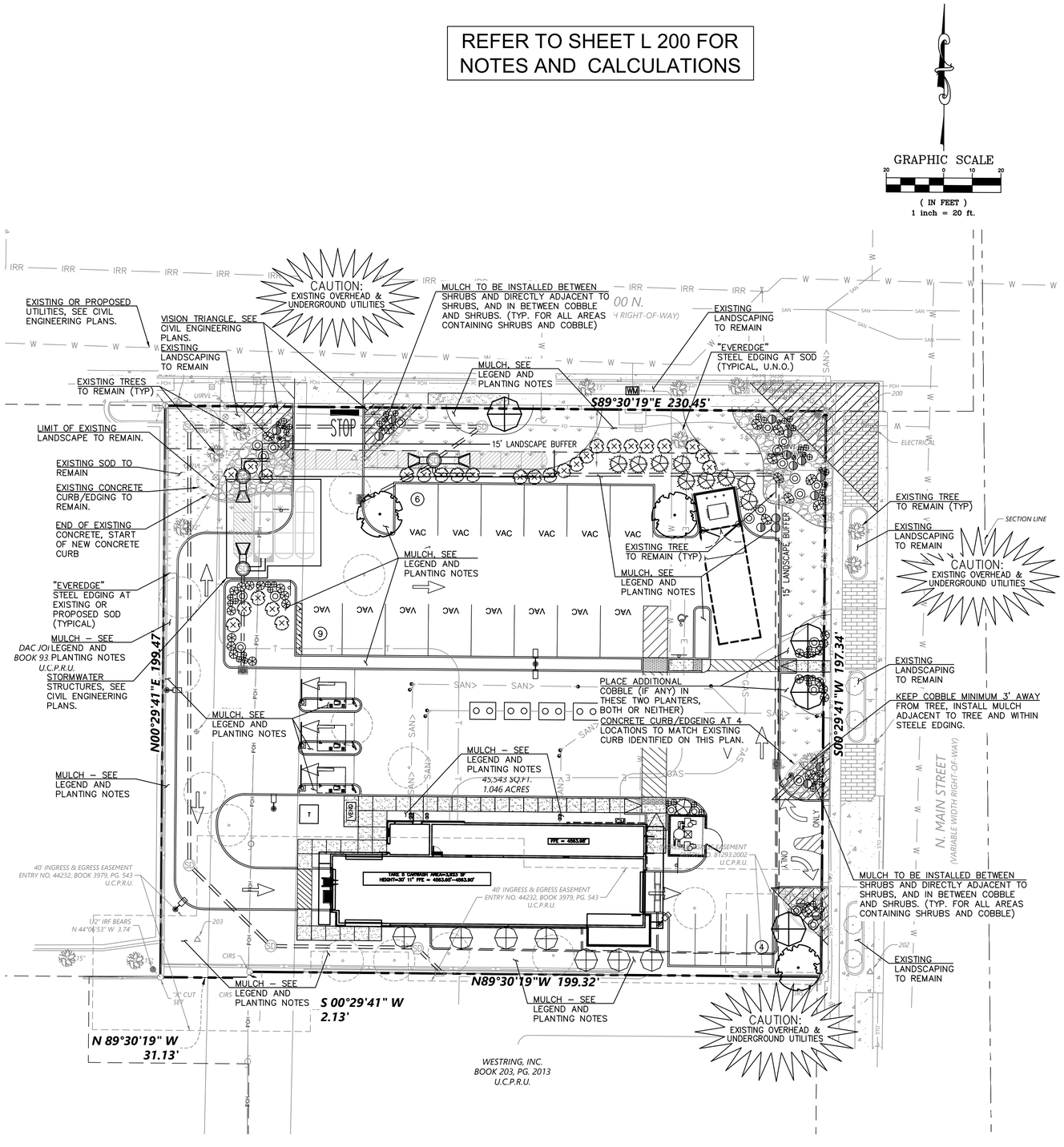
PROJECT NO: JM-TF021032
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LANDSCAPE NOTES AND PLANTING CALCS

L 200

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 LANDSCAPE SPANISH FORK, UT.DWG 12/6/2022 12:08 PM GILBERT BEAN

REFER TO SHEET L 200 FOR NOTES AND CALCULATIONS



LEGEND:

SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	FLOWER COLOR	QUANTITY
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PRELIMINARY LANTING PLAN

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K. ALL UTILITY EASEMENTS SHALL BE MARKED PRIOR TO EXCAVATION, AND PARTICULAR ATTENTION PAID TO TREE PLACEMENT WITHIN AND THROUGHOUT SITE.

L. CONTRACTOR SHALL PROVIDE ROCK SAMPLES, IF SPECIFIED ON PLANS, AND OBTAIN APPROVAL FROM OWNER PRIOR TO FINAL DELIVERY OF QUARRIED MATERIALS. NO STEEL EDGING SHALL BE USED BETWEEN ROCK TYPES.

M. CONTRACTOR TO PAY CLOSE ATTENTION TO FINISH GRADES. SHOULD GRAVELED AREAS EXCEED 4:1 SLOPE, CONTRACTOR TO OBTAIN APPROVAL OF LANDSCAPE DESIGNER PRIOR TO MULCH INSTALLATION.

N. LANDSCAPE SHALL BE INSTALLED ACCORDING TO PLANS, DETAILS, AND SPECIFICATIONS. SHOULD CHANGES BE IMPLEMENTED IN THE FIELD, A NEW SET OF PLANS ARE REQUIRED TO BE SUBMITTED TO THE SPANISH FORK CITY OR GOVERNING AGENCY. LANDSCAPE DESIGNER IS NOT UNDER CONTRACT TO PROVIDE THESE PLANS, EXCEPT AS PROVIDED FOR IN ORIGINAL CONTRACT.

JM CIVIL
9540 Maroon Circle, Suite 260
Englewood, CO 80112
John Measels, PE
CIVIL ENGINEER

PROFESSIONAL ENGINEER
No. 10527678-2202
JOHN T. MEASELS
STATE OF UTAH
12/05/22

TAKE FIVE EXPRESS CAR WASH
891 N. MAIN ST.,
SPANISH FORK, UT 84660

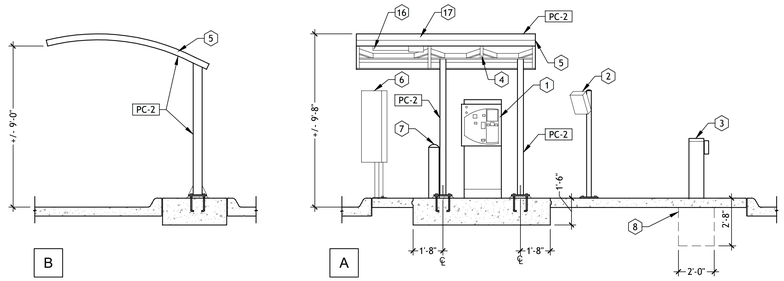
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	09/02/22	SECOND SUBMITTAL	JV
	12/05/22	THIRD SUBMITTAL	POM

PROJECT NO: JM-TF021032
DRAWN BY: JV
CHECKED BY: JMCE
ISSUE DATE: 12/05/22

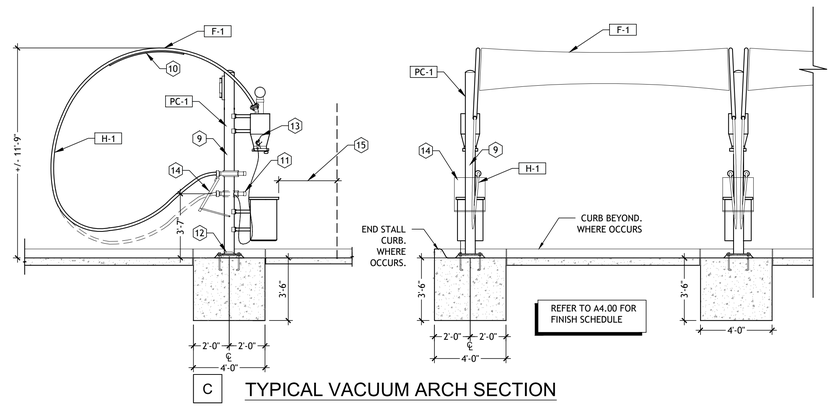
LANDSCAPE NOTES AND PLANTING CALCS

L 200

J:\TAKE FIVE OIL\JM-TF021032 - SPANISH FORK, UT_CURRENT DRAWINGS\JM-TF021032 LANDSCAPE SPANISH FORK, UT.DWG 12/6/2022 12:08 PM GILBERT BEAN



TYPICAL PAY KIOSK ISLAND SECTION

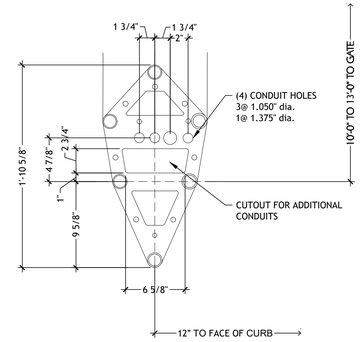


TYPICAL VACUUM ARCH SECTION

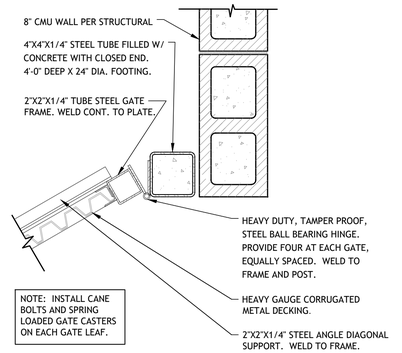
KEYNOTES

1. XPT PAY KIOSK. REFER TO 8/A1.50 FOR MANUFACTURER BASE FRAME. CONFIRM FOOTING AND BASE PLATE/ ANCHOR BOLT PLACEMENT WITH MANUFACTURER (DRB SYSTEMS) INSTRUCTIONS PRIOR TO INSTALLATION
2. FAST PASS READER. REFER TO ELECTRICAL DWG'S FOR REQUIREMENTS. NO FOOTING REQUIRED PER THE MANUFACTURER (DRB SYSTEMS)
3. VEHICULAR GATE. REFER TO ELECTRICAL DWG'S FOR REQUIREMENTS. REFER TO MANUFACTURER'S (DRB SYSTEMS) INSTALLATION REQUIREMENTS FOR FOR REQUIRED FOOTING AND BASE PLATE/ ANCHOR BOLT PLACEMENT
4. LED LIGHT 'S2' FURNISHED AND INSTALLED BY GENERAL CONTRACTOR
5. PRE-MANUFACTURED CANOPY BY TSS (WWW.TSSCWS.COM). MODEL: CPSHD - HEAVY DUTY DUAL POST CURVED PAY STATION CANOPY. SEE BOLT PATTERN THIS SHEET. REFER TO STRUCTURAL DWG'S FOR FOOTING
6. MENU SIGN BY OWNER. REFER TO ELECTRICAL DWG'S FOR REQUIREMENTS
7. BOLLARD. REFER TO CIVIL.
8. LINE OF FOOTING. VERIFY FOOTING REQUIREMENTS WITH THE MANUFACTURER'S INSTALLATION MANUAL.
9. UMBRELLA ARCH. MANUFACTURER: VACUTECH. REFER TO BASE PLATE BOLT PATTERN THIS SHEET. REFER TO STRUCTURAL FOR FOOTING.
10. 'S1' LIGHT FIXTURE. FURNISHED BY OWNER, INSTALLED BY GENERAL CONTRACTOR.
11. ACCESSIBLE VACUUM HOSE AT HANDICAP ACCESSIBLE STALL. REFER TO CIVIL FOR HANDICAP ACCESSIBLE VACUUM STALL
12. WHEEL STOP (WHERE OCCURS). REFER TO CIVIL.
13. COMPRESSED AIR HOSE AND NOZZLE FURNISHED BY MANUFACTURER WITH VACUUM ARCH. GENERAL CONTRACTOR SHALL PROVIDE (1) UNDERGROUND SLEEVE FROM EQUIPMENT ROOM TO EACH ROW OF VACUUM STALLS. REFER TO A1.10
14. CAR MAT RACK FURNISHED BY MANUFACTURER.
15. MAINTAIN MINIMUM ACCESSIBLE ROUTE WIDTH. REFER TO CIVIL DWG'S.
16. EXTERIOR INDIRECT HEATER. REFER TO MECHANICAL DWG'S.
17. EXTENDED CANOPY OVERHANG BY TSS; REFER TO STRUCTURAL DWG'S FOR FOOTINGS.

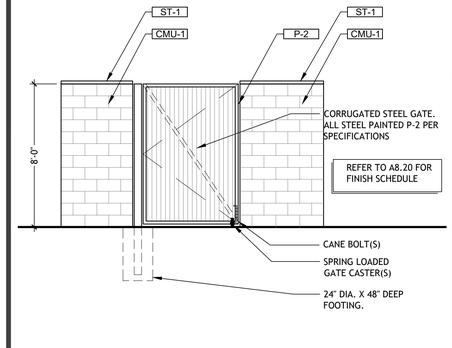
TYPICAL VACUUM & PAY KIOSK ISLAND SECTIONS — 1/4" = 1'-0" — A000-DETL-A00 — 04.11.2022 — **11**



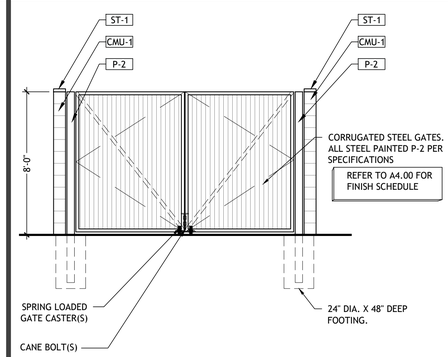
PAY KIOSK (XPT) BASE PLATE — 1-1/2" = 1'-0" — A000-DETL-A00 — 04.08.2022 — **8**



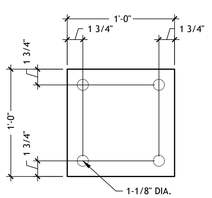
GATE JAMB DETAIL — 1-1/2" = 1'-0" — A000-DETL-A00 — 04.08.2022 — **7**

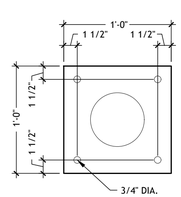


PRODUCER ENCLOSURE ELEVATION — 1/4" = 1'-0" — A000-DETL-A00 — 04.08.2022 — **4**

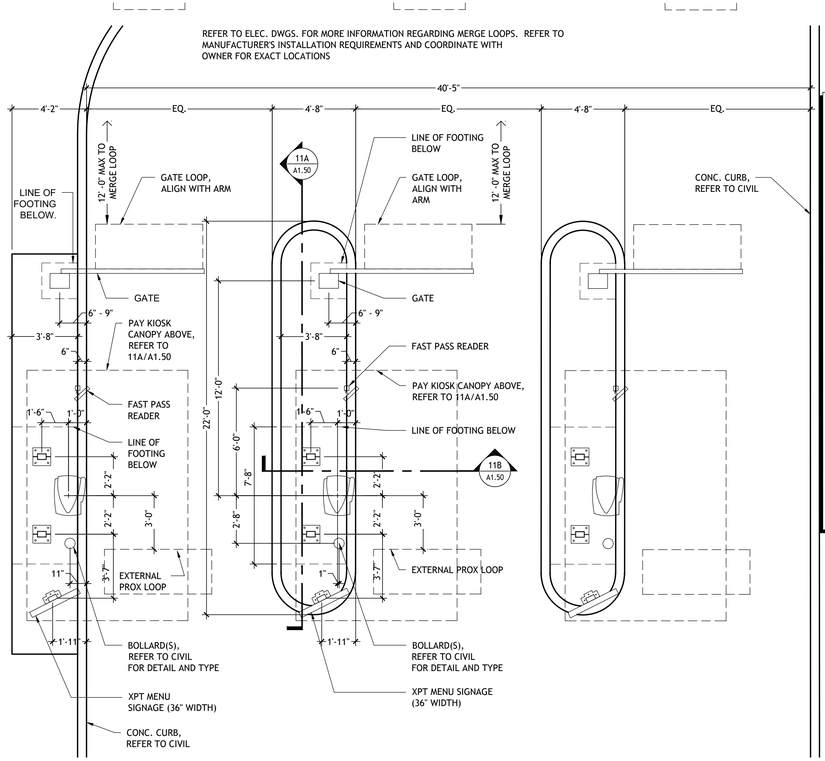


REFUSE ENCLOSURE ELEVATION — 1/4" = 1'-0" — A000-DETL-A00 — 04.08.2022 — **3**





BASE PLATE DIMS — 1-1/2" = 1'-0" — A000-DETL-A00 — 04.11.2022 — **17**



OWNER FURNISHED PRODUCTS AND NOTES

1. ALL FOOTINGS AND ANCHOR BOLTS FURNISHED AND INSTALLED BY GENERAL CONTRACTOR. REFER TO STRUCTURAL FOR MORE INFORMATION.
2. XPT PAY KIOSK FURNISHED AND INSTALLED BY OWNER'S CONTRACTOR. REFER TO ELECTRICAL FOR POWER AND DATA REQUIREMENTS
3. GATE FURNISHED AND INSTALLED BY OWNER'S CONTRACTOR. REFER TO ELECTRICAL FOR POWER AND DATA REQUIREMENTS
4. FAST PASS READER FURNISHED AND INSTALLED BY OWNER'S CONTRACTOR. REFER TO ELECTRICAL FOR POWER AND DATA REQUIREMENTS
5. XPT CANOPY (TSS) FURNISHED AND INSTALLED BY OWNER'S CONTRACTOR. REFER TO ELECTRICAL FOR POWER AND DATA REQUIREMENTS
6. XPT MENU SIGNAGE FURNISHED AND INSTALLED BY OWNER'S CONTRACTOR. REFER TO ELECTRICAL FOR POWER AND DATA REQUIREMENTS
7. LOOPS FURNISHED BY OWNER AND INSTALLED BY GENERAL CONTRACTOR. REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS AND COORDINATE WITH OWNER FOR EXACT LOCATIONS

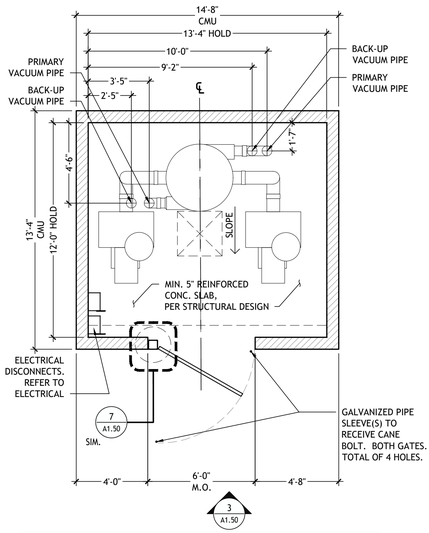
REFER TO CIVIL PAVING DRAWINGS FOR ALL PAVING SPECIFICATIONS AND DIMENSIONAL CONTROLS.

SINGLE POINT OF CONTACT:
BOB MCQUAGE, ICWG ENGINEERING & TECHNICAL DIRECTOR
901.870.3498
BOBMCQUAGE@ICWG.COM

NORTH

PAY KIOSK ENLARGED PLAN — 1/4" = 1'0" — A000-DETL-A00 — 04.11.2022 — **9**

AOR TO COORDINATE WITH VACUUM EQUIPMENT MANUFACTURER FOR VACUUM LINE STUB LOCATIONS.

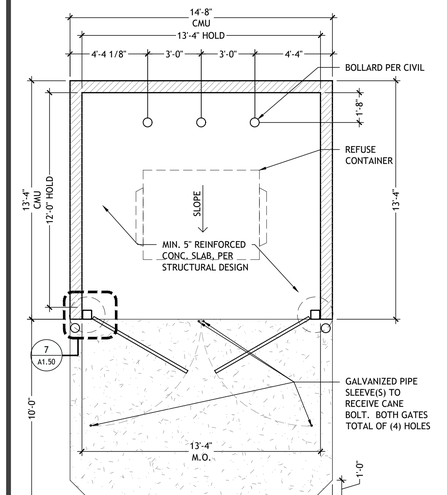


OWNER FURNISHED PRODUCTS AND NOTES

1. VACUUM EQUIPMENT FURNISHED AND INSTALLED BY OWNER'S CONTRACTOR.
2. GENERAL CONTRACTOR SHALL FURNISH AND INSTALL UNDERGROUND VACUUM SUCTION PIPES. REFER TO A1.10 FOR MORE INFORMATION.

NORTH

VACUUM EQUIP. ENCLOS. ENLARG. PLAN — 1/4" = 1'-0" — **5**



REFER TO CIVIL PAVING DRAWINGS FOR ALL PAVING SPECIFICATIONS AND DIMENSIONAL CONTROLS.

NORTH

TRASH ENCLOSURE ENLARGED PLAN — 1/4" = 1'-0" — **1**

KEN McCRACKEN, ARCHITECT
Architecture • Program Management • Permitting
38 EXECUTIVE PARK
SUITE 310
IRVINE, CA 92614
CONTACT: ROGER KRAUSE
PHONE: (949) 743-5426
EMAIL: rkrause@pmdginc.com

KEN McCRACKEN, ARCHITECT
SEAL:

STATE OF UTAH
KENNETH MCCRACKEN
7296670-0301
LICENSED ARCHITECT
12/28/22
KJM/3408

CONSULTANT:

TAKE 5 CAR WASH
PROTOTYPE: 110' TUNNEL

891 N. MAIN STREET
SPANISH FORK, UT 84660

REV	DATE	DESCRIPTION
△	12.28.22	AGENCY INITIAL SUBMITTAL

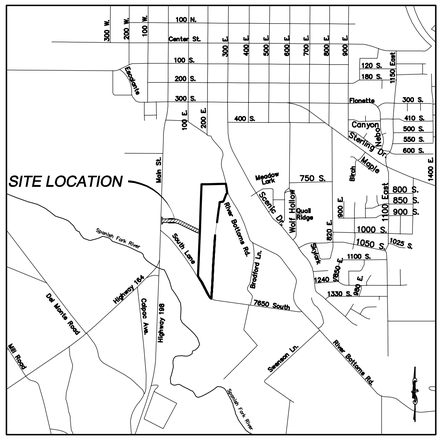
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CHECKED BY: RK
ARCH. PROJECT NO.: TKC22005
SHEET NAME: SITE STRUCTURES
SHEET NUMBER: A1.50

AGENCY INITIAL SUBMITTAL DATE 12-28-22

VOLUNTEER DRIVE

STREET IMPROVEMENTS

SPANISH FORK, UTAH



VICINITY MAP

–NTS–

GENERAL NOTES:

1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE–CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.
6: CONTACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCMENT OF CONSRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.

SPANISH FORK SOUTHEAST IRRIGATION COMPANY NOTES:

1. APPLICANT MUST NOTIFY SFSEIC AT LEAST 24 HOURS BEFORE CONSTRUCTION ON SFSEIC FACILITIES. CALL LYNN SWENSON WITH SFSEIC AT 801–735–6541, OR ED VIDMAR 801–368–5879. FAILURE TO DO SO MAY RESULT IN $5,000 FINE.
2. ALL CONSTRUCTION MUST BE DONE TO SFSEIC STANDARDS.
3. SFSEIC CONTACT DURING CONSTRUCTION: ED VIDMAR AT 801–368–5879.

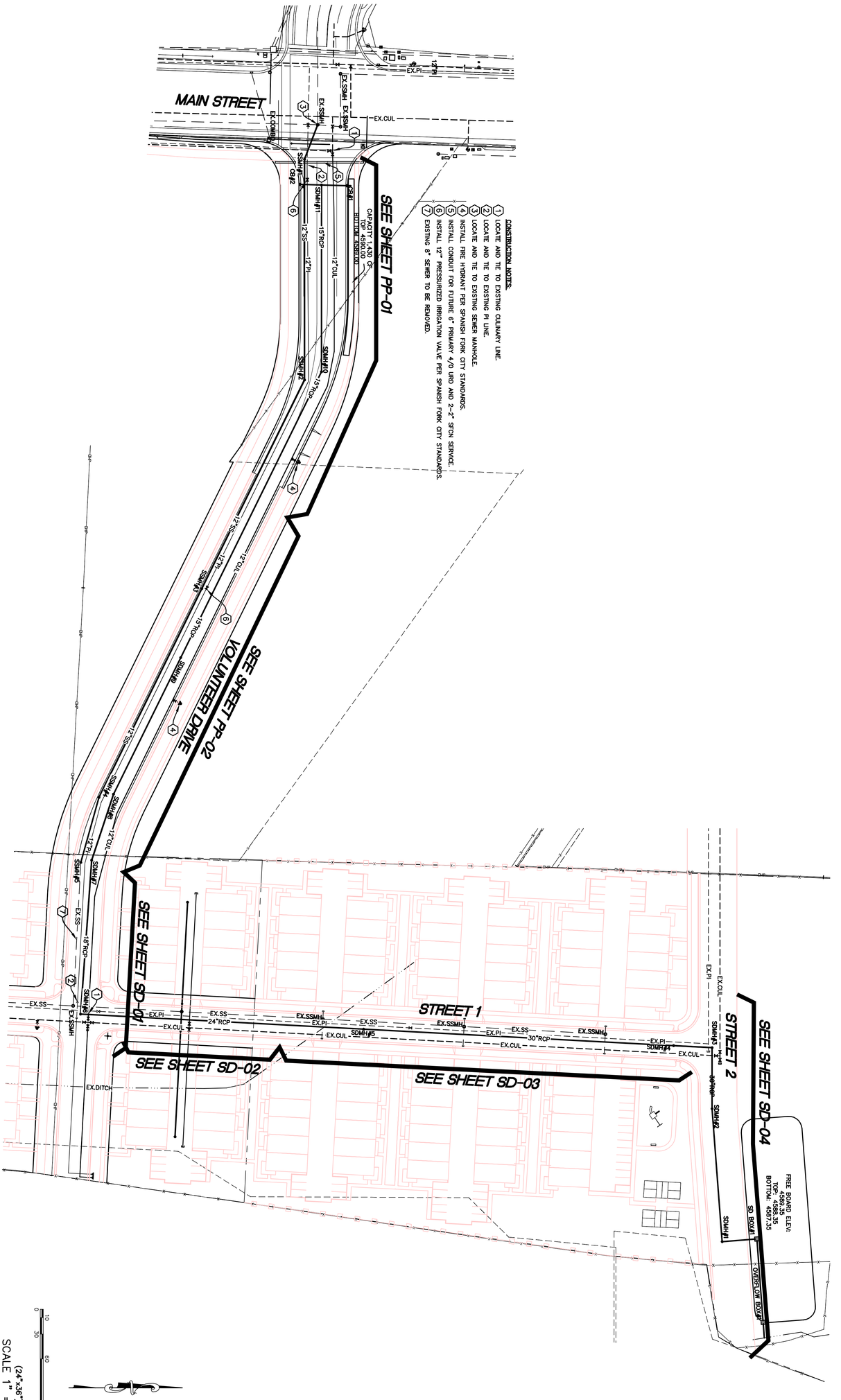
-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2	UTILITY & INDEX SHEET
3	ELECTRICAL
PP–01	PLAN & PROFILE – VOLUNTEER DRIVE STA. 11+00 TO STA. 16+00
PP–02	PLAN & PROFILE – VOLUNTEER DRIVE STA. 16+00 TO STA. 21+00
SD–01	PLAN & PROFILE – VOLUNTEER DRIVE STA. 21+00 TO STA. 23+00
SD–02	PLAN & PROFILE – STREET 1 STA. 23+00 TO STA. 25+50
SD–03	PLAN & PROFILE – STREET 1 STA. 25+50 TO STA. 30+72.01
SD–04	PLAN & PROFILE – STREET 2 STA. 17+00 TO STA. 21+23.95
DT–01	DETAIL SHEET

REGISTERED PROFESSIONAL ENGINEER
SCOTT D. PETERSON
No. 362274
12/8/22
STATE OF UTAH

VOLUNTEER DRIVE

ATLAS ENGINEERING L.L.C.
PHONE: 801–655–0566
FAX: 801–655–0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660



VOLUNTEER DRIVE

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

UTILITY & INDEX

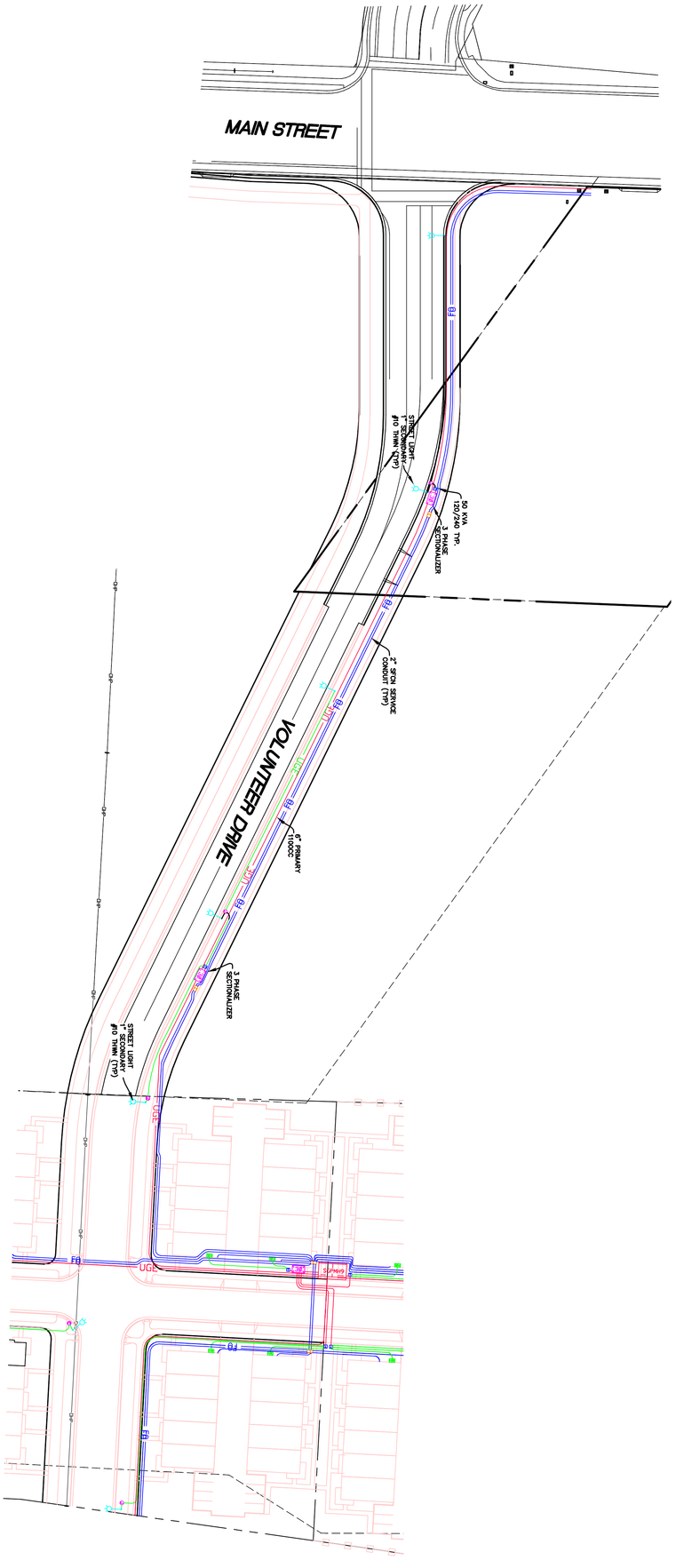
SPANISH FORK, UTAH

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SHEET NO.

2

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SCALE 1" = 60' (24"x36")
SCALE 1" = 120' (11"x17")

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VOLUNTEER DRIVE

ATLAS ENGINEERING L.L.C.

PHONE: 801-655-0566
FAX: 801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

ELECTRICAL PLAN

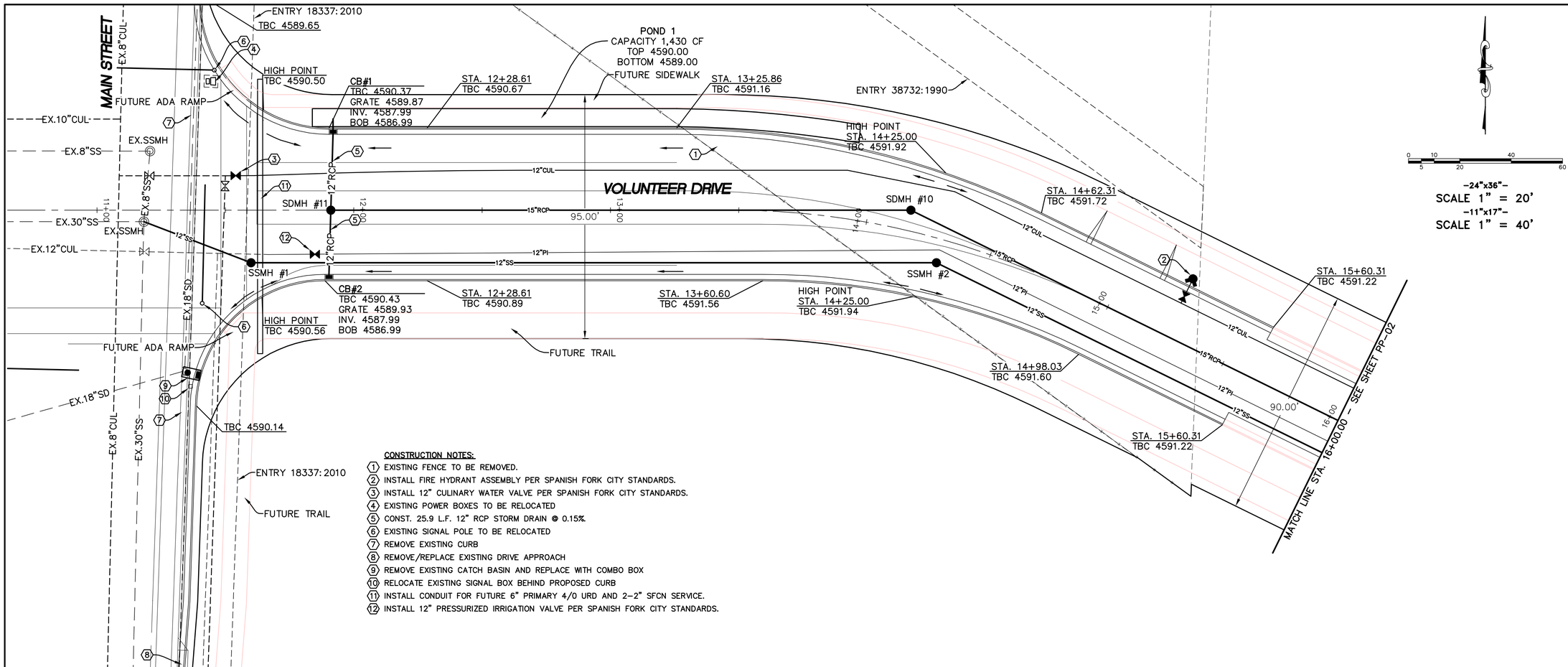
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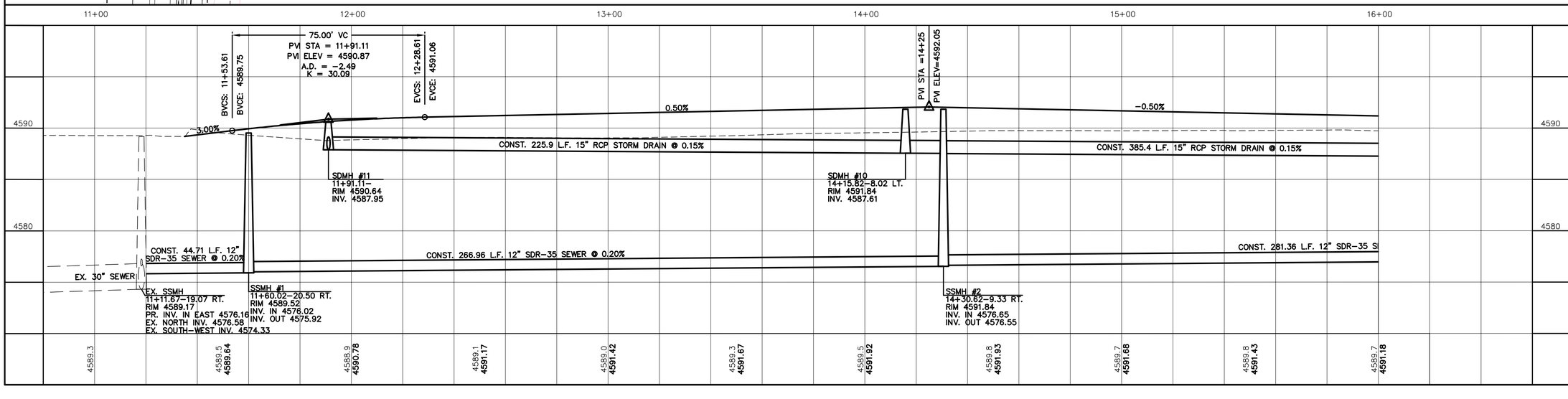
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CONSTRUCTION NOTES:

1. EXISTING FENCE TO BE REMOVED.
2. INSTALL FIRE HYDRANT ASSEMBLY PER SPANISH FORK CITY STANDARDS.
3. INSTALL 12" CULINARY WATER VALVE PER SPANISH FORK CITY STANDARDS.
4. EXISTING POWER BOXES TO BE RELOCATED
5. CONST. 25.9 L.F. 12" RCP STORM DRAIN @ 0.15%.
6. EXISTING SIGNAL POLE TO BE RELOCATED
7. REMOVE EXISTING CURB
8. REMOVE/REPLACE EXISTING DRIVE APPROACH
9. REMOVE EXISTING CATCH BASIN AND REPLACE WITH COMBO BOX
10. RELOCATE EXISTING SIGNAL BOX BEHIND PROPOSED CURB
11. INSTALL CONDUIT FOR FUTURE 6" PRIMARY 4/0 URD AND 2-2" SFCN SERVICE.
12. INSTALL 12" PRESSURIZED IRRIGATION VALVE PER SPANISH FORK CITY STANDARDS.



SHEET NO. PP-01

PLAN & PROFILE SHEET
STA. 11+00 TO STA. 16+00

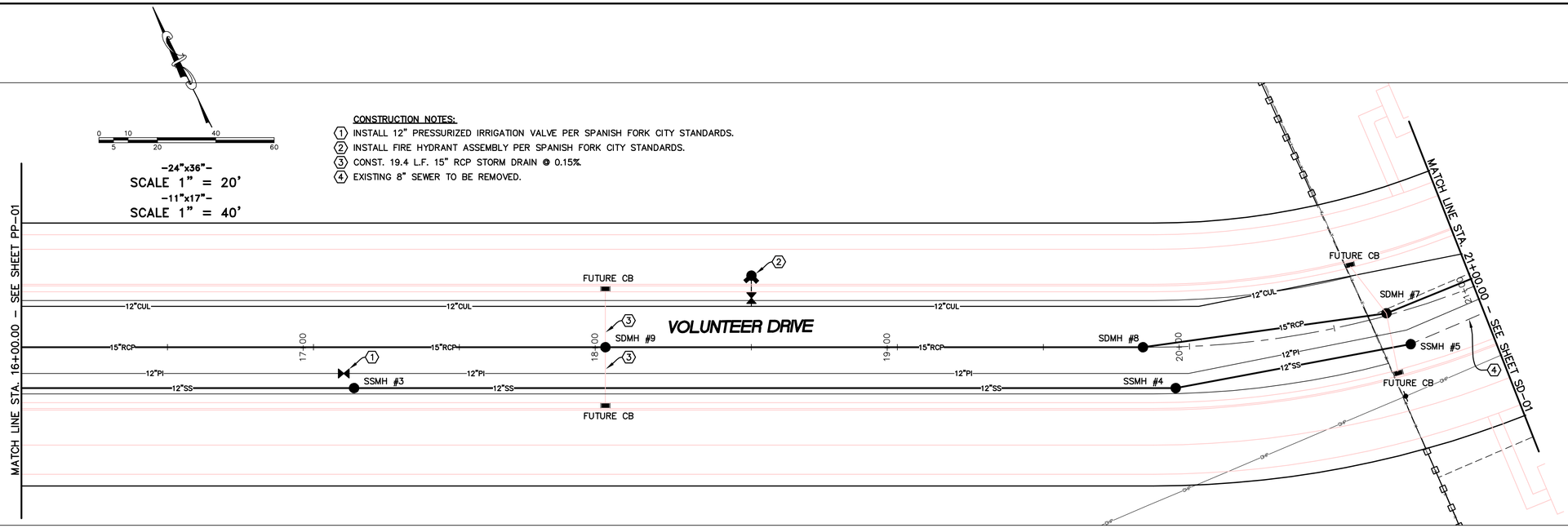
SPANISH FORK, UTAH

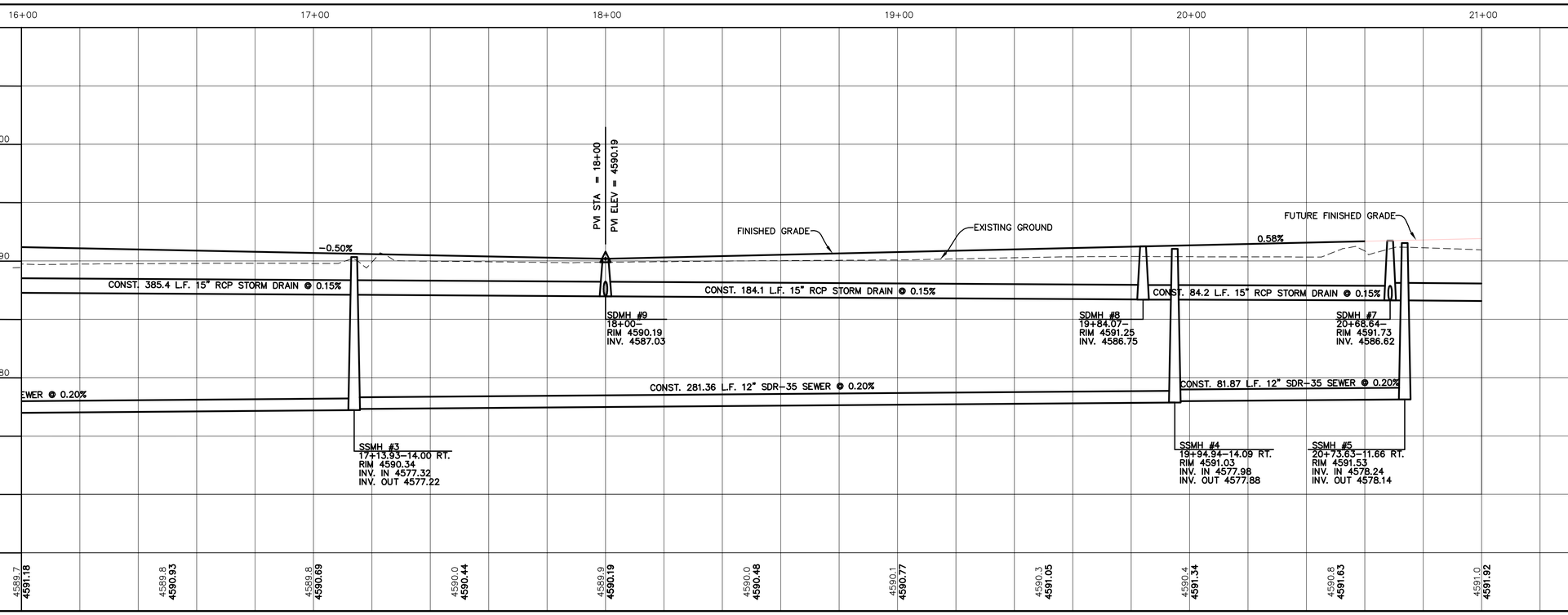
VOLUNTEER DRIVE

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

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SHEET NO.
PP-02

PLAN & PROFILE SHEET
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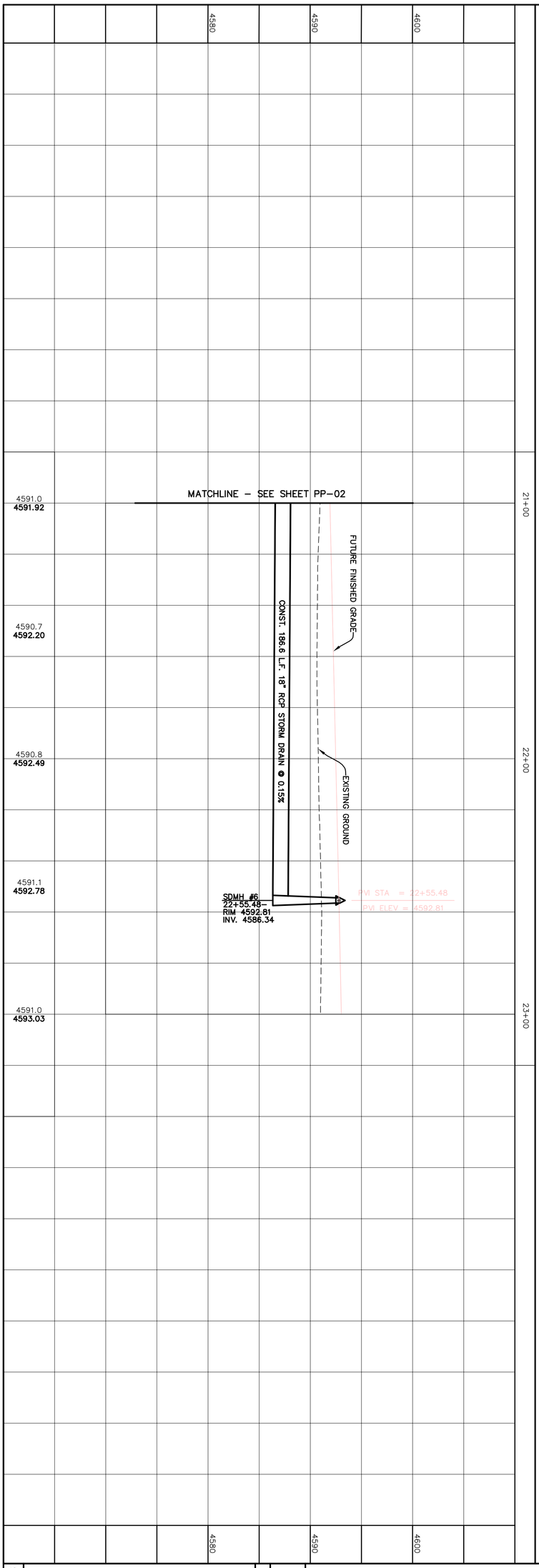
SPANISH FORK, UTAH

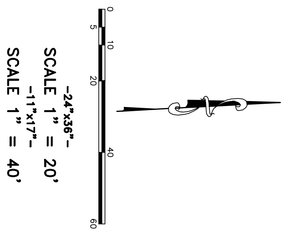
VOLUNTEER DRIVE

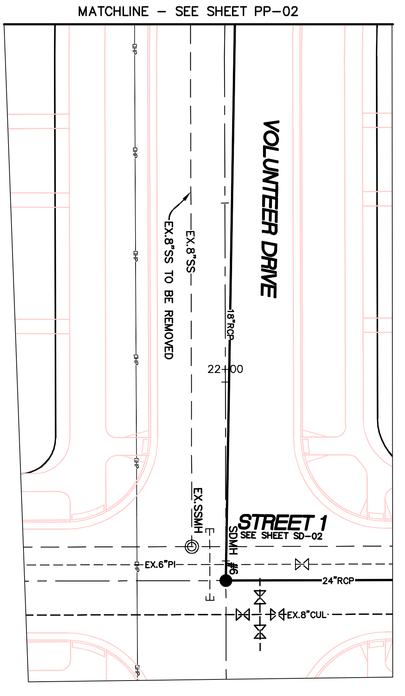
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

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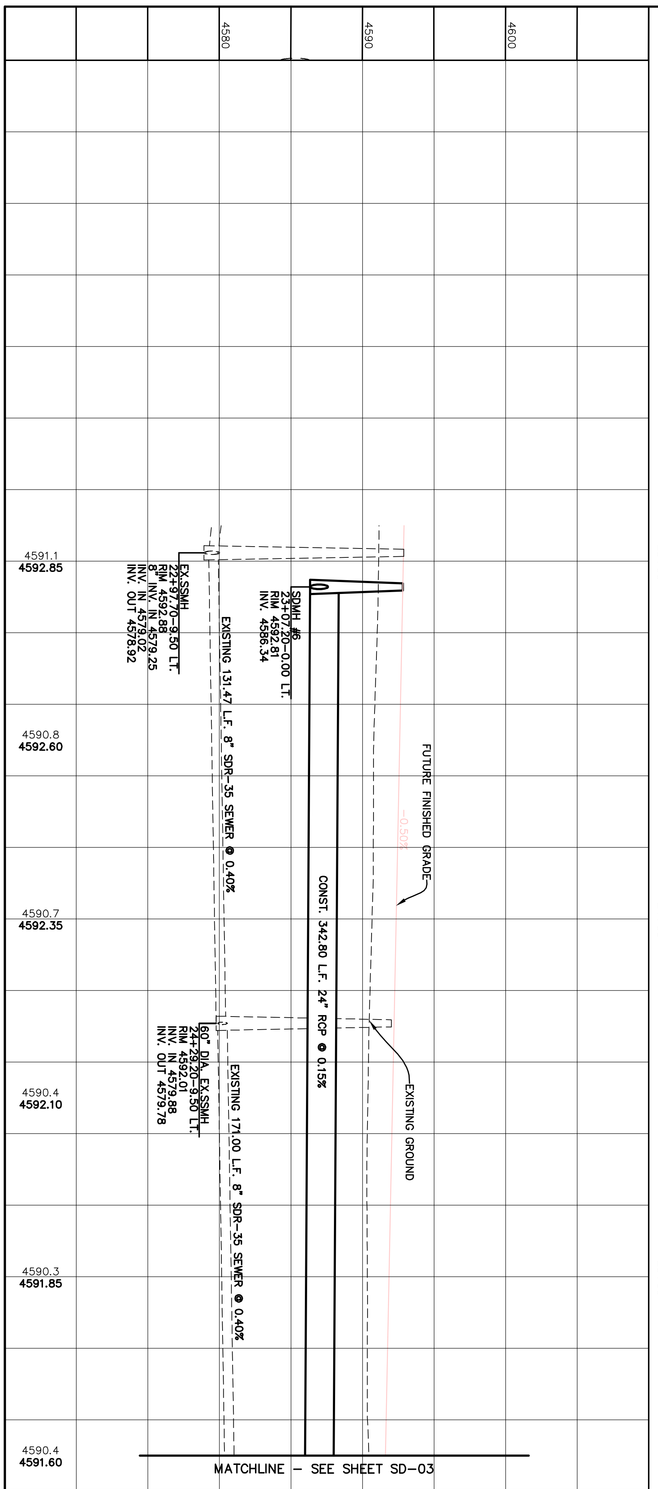
VOLUNTEER DRIVE

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

PLAN & PROFILE SHEET
STA. 21+00 TO STA. 23+00

SPANISH FORK, UTAH

SHEET NO.
SD-01



SCALE 1" = 20'
-24"x36"-
-11"x17"-
SCALE 1" = 40'

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VOLUNTEER DRIVE

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PHONE: 801-655-0566
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946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

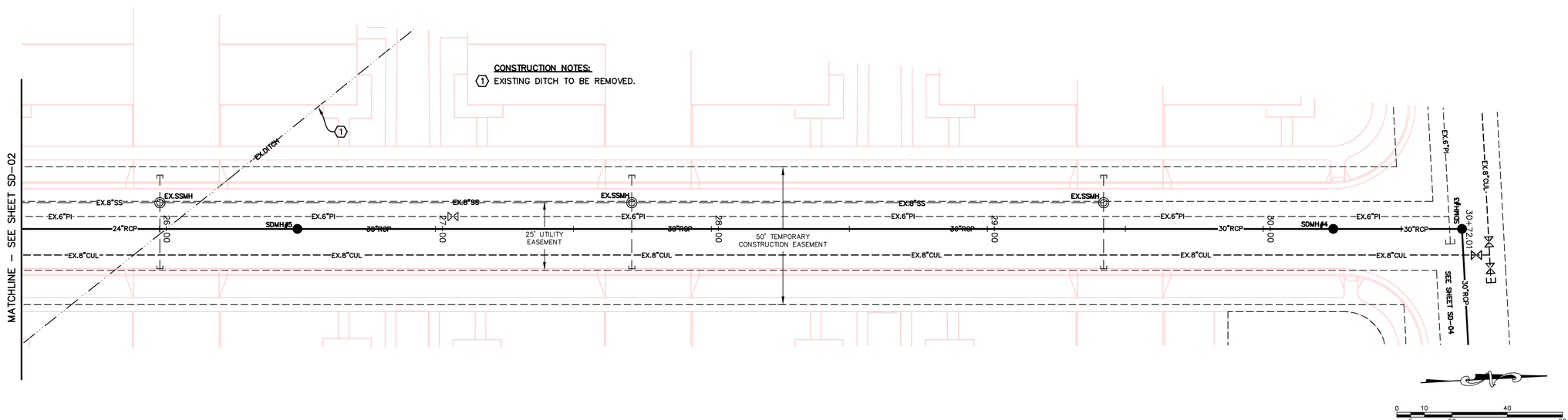
PLAN & PROFILE SHEET
STA. 23+00 TO STA. 25+50

SPANISH FORK, UTAH

SHEET NO.
SD-02

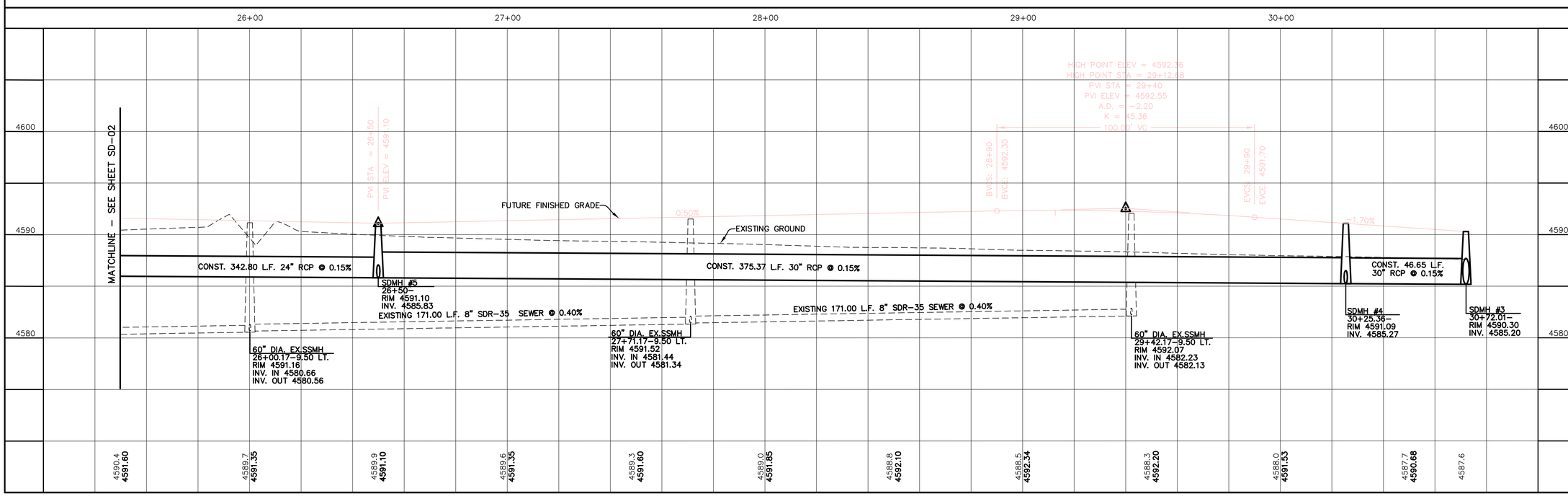
CONSTRUCTION NOTES:

1. EXISTING DITCH TO BE REMOVED.



0 10 40
5 20 60

-24"x36"-
SCALE 1" = 20'
-11"x17"-
SCALE 1" = 40'



SHEET NO.
SD-03

PLAN & PROFILE SHEET
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SPANISH FORK, UTAH

VOLUNTEER DRIVE

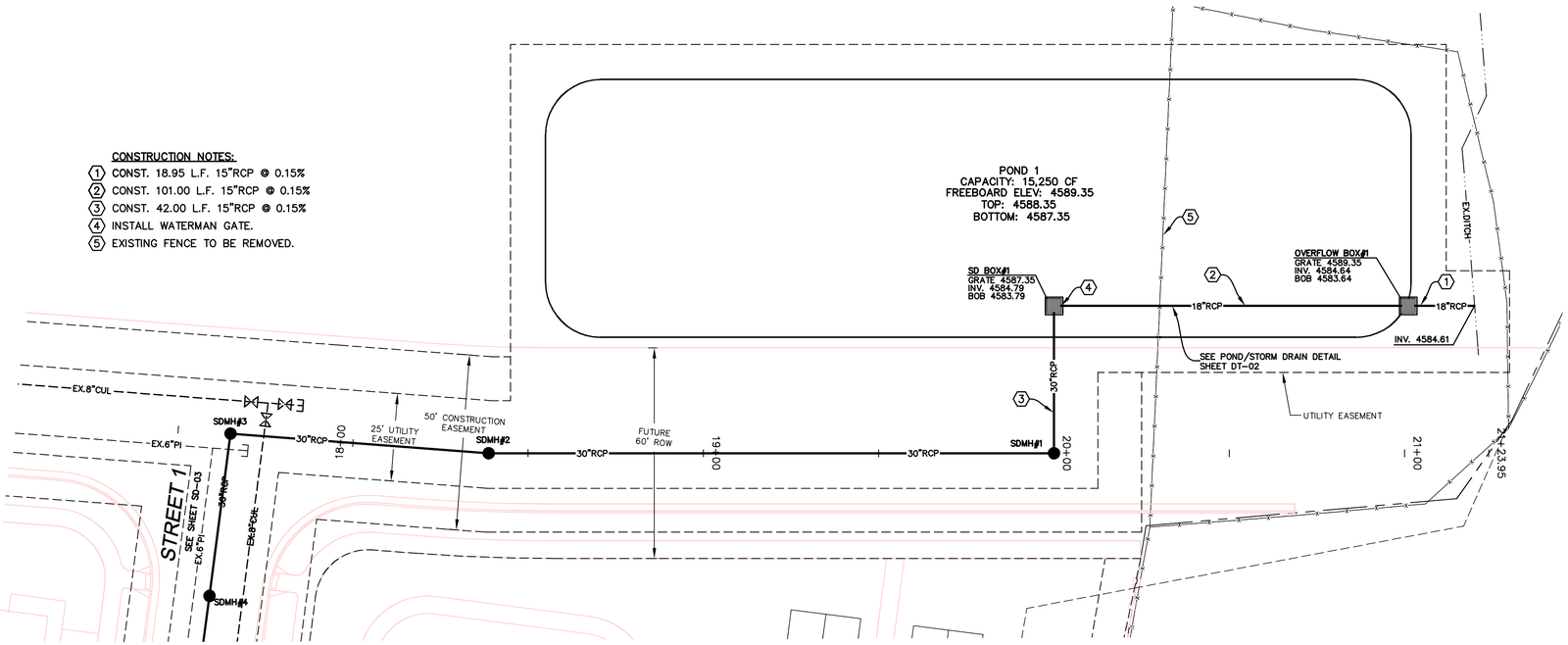
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

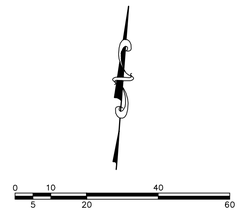
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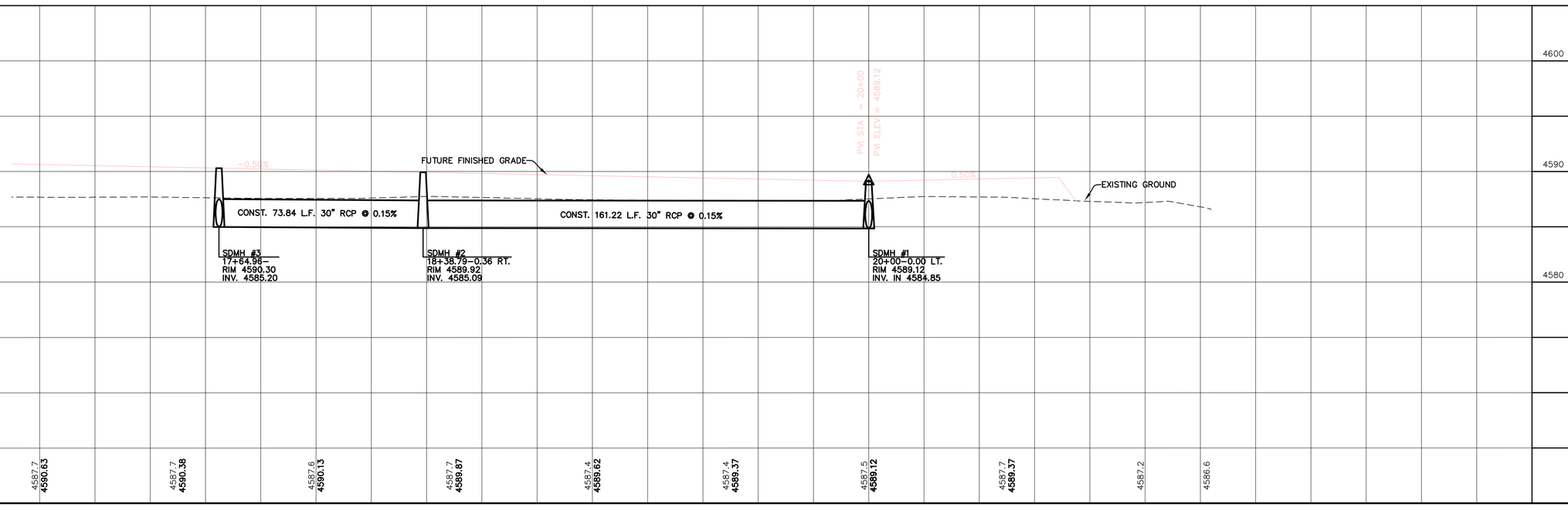
CONSTRUCTION NOTES:

1. CONST. 18.95 L.F. 15"RCP @ 0.15%
2. CONST. 101.00 L.F. 15"RCP @ 0.15%
3. CONST. 42.00 L.F. 15"RCP @ 0.15%
4. INSTALL WATERMAN GATE.
5. EXISTING FENCE TO BE REMOVED.





-24"x36"-
SCALE 1" = 20'
-11"x17"-
SCALE 1" = 40'



SHEET NO.
SD-04

PLAN & PROFILE SHEET
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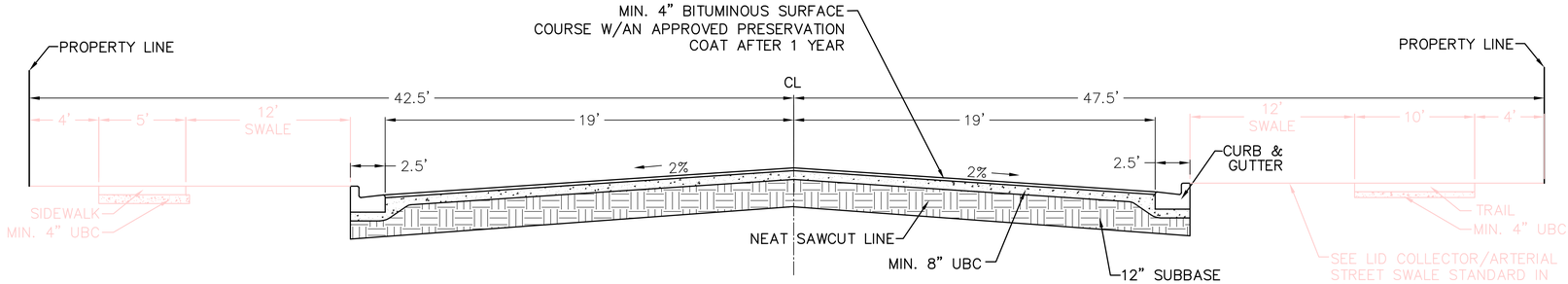
SPANISH FORK, UTAH

VOLUNTEER DRIVE

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PHONE:801-655-0566
FAX:801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

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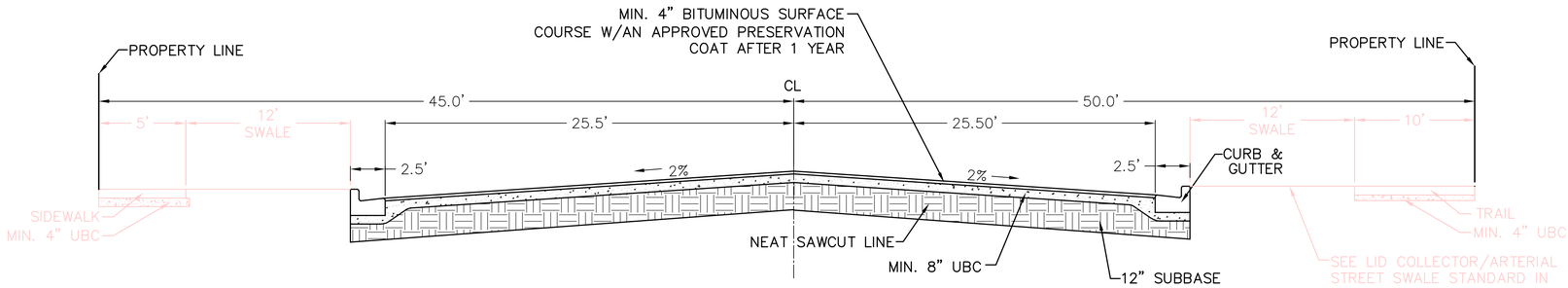
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VOLUNTEER DRIVE

MINOR COLLECTOR 2 LANE STREET - 90' ROW

–NTS–



VOLUNTEER DRIVE

MINOR COLLECTOR 2 LANE STREET - 95' ROW

–NTS–

SHEET NO. DT-01

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DETAIL SHEET

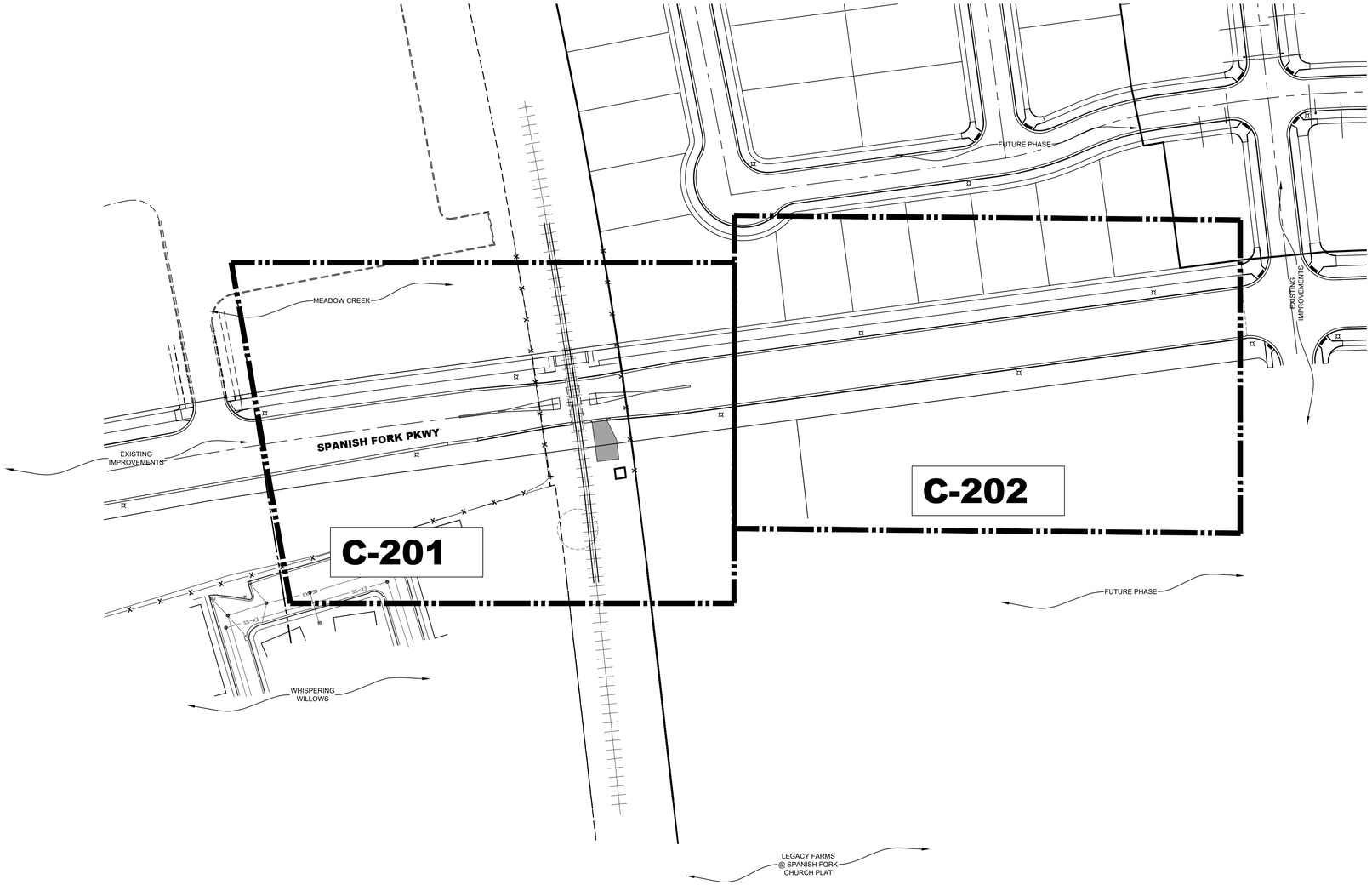
SPANISH FORK, UTAH

VOLUNTEER DRIVE

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PHONE:801-655-0566
FAX:801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

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SPANISH FORK PARKWAY

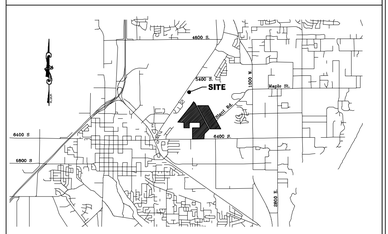


NORTH

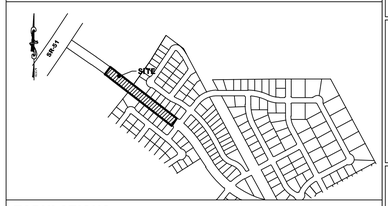
SCALE: 1" = 60'

60 30 0 60

VICINITY MAP



PROJECT LOCATION MAP



TABULATIONS

SPANISH FORK PARKWAY

TOTAL AREA:	2.21 ACRES
ROADWAY:	2.02 ACRES
AREA IN UPRR :	0.19 ACRES

TABLE OF CONTENTS

	COVER
C-200	GRADING PLAN
C-201	SPANISH FORK PARKWAY PLAN & PROFILE
C-202	SPANISH FORK PARKWAY PLAN & PROFILE
	SEE CRS PLANS FOR RAILROAD CROSSING (SHEETS 1-3)
C-400	STRIPING PLAN
C-501	DETAILS
E-101	ELECTRICAL PLAN (SPANISH FORK CITY)

NOTES

1. ALL CONSTRUCTION TO BE DONE ACCORDING TO SPANISH FORK CITY STANDARDS AND SPECIFICATIONS.
2. ALL ROADWAY WORK DONE WITHIN UDOT RIGHT-OF-WAY SHALL BE DONE PER UDOT STANDARDS AND SPECIFICATIONS. SEE SHEET C-102
3. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
4. ALL DRINKING WATER LINES TO BE 12" UNLESS OTHERWISE NOTED.
5. ALL PRESSURIZED IRRIGATION LINES TO BE 12" UNLESS OTHERWISE NOTED.
6. ALL INTERSECTIONS TO HAVE ADA HANDICAP RAMPS ACCORDING TO CITY STANDARDS.
7. ALL STREETS TO BE 98' RIGHT-OF-WAY UNLESS NOTED OTHERWISE.
8. ALL FENCING WITHIN THE PROPOSED BOUNDARY TO BE REMOVED.
9. CONNECT TO EXISTING ELECTRICAL AND COMMUNICATION IMPROVEMENTS WHEN INSTALLING NEW FACILITIES AS PER SPANISH FORK CITY DESIGN.
10. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY SPANISH FORK CITY DESIGN.
11. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
12. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT, THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WAS ISSUED AT THE PRE-CONSTRUCTION MEETING.
13. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC AND SPANISH FORK CITY STANDARDS AT THE DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO THE UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATION SERVICES AND LANDSCAPING RESTORATION.

EST. 1855
SPANISH FORK
PRIDE & PROGRESS

DEVELOPER / OWNER

SPANISH FORK CITY
40 S MAIN ST.
SPANISH FORK, UTAH 84660
(801)804-4500

ENGINEER

LEI CONSULTING ENGINEERS
3302 NORTH MAIN
SPANISH FORK, UTAH 84660
(801)798-0555

PROJECT NAME

SPANISH FORK PARKWAY
SPANISH FORK, UTAH

LEI
- A Utah Corporation -
ENGINEERS
SURVEYORS
PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

REGISTERED PROFESSIONAL ENGINEER
No. 352906
BRIAN T. GABLER
05/06/2022
STATE OF UTAH

SPANISH FORK PARKWAY - PHASE 2

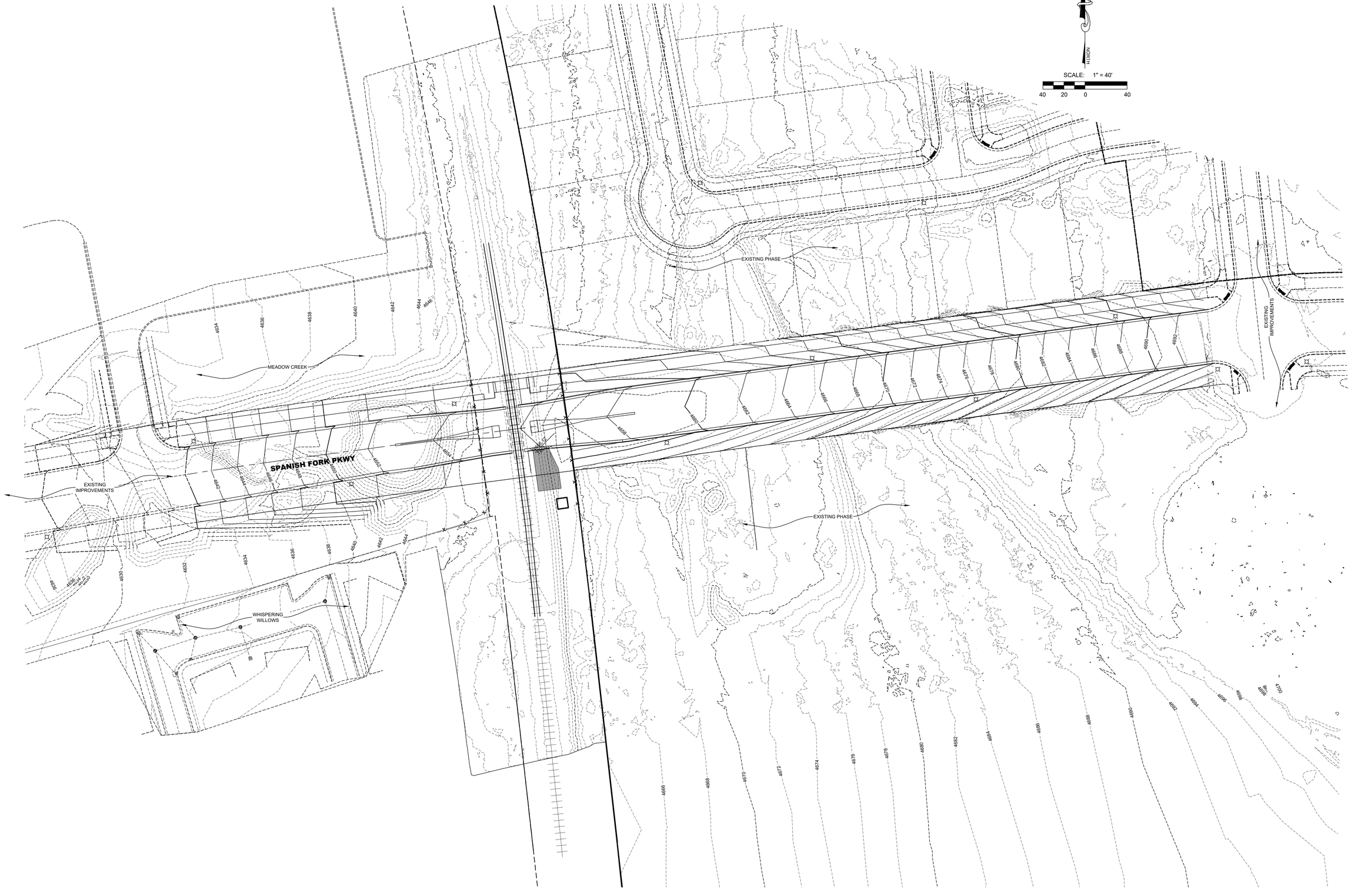
SPANISH FORK, UTAH

COVER

REVISIONS
1 -
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LEI PROJECT #: 2018-0088
DRAWN BY: DSE
DESIGNED BY: BTG
SCALE: 1"=60'
DATE: 05/06/2022

SHEET
COVER



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ENGINEERS
SURVEYORS
PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

REGISTERED PROFESSIONAL ENGINEER
NO. 332806
BRIAN T. GABLER
05/06/2022
STATE OF UTAH

SPANISH FORK PARKWAY - PHASE 2

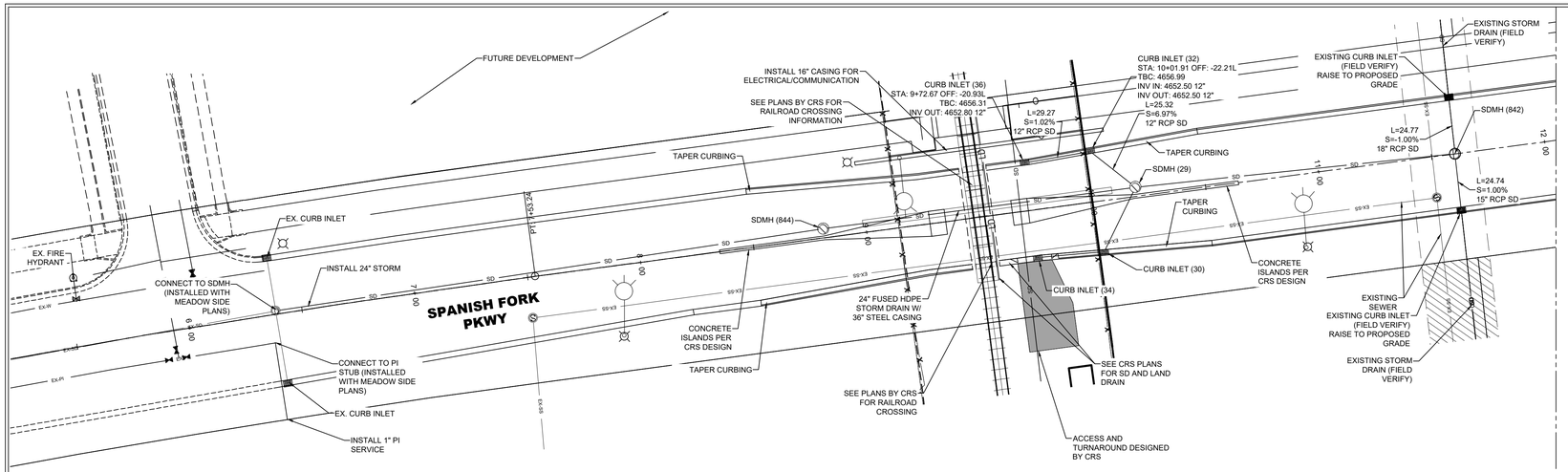
SPANISH FORK, UTAH

GRADING PLAN

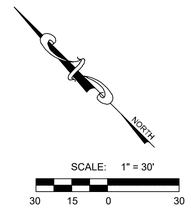
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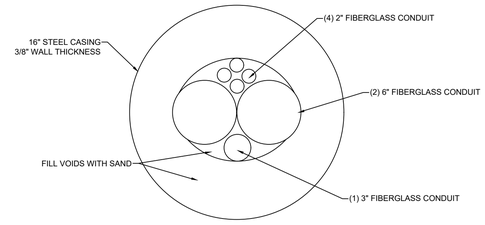
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SHEET
C-200

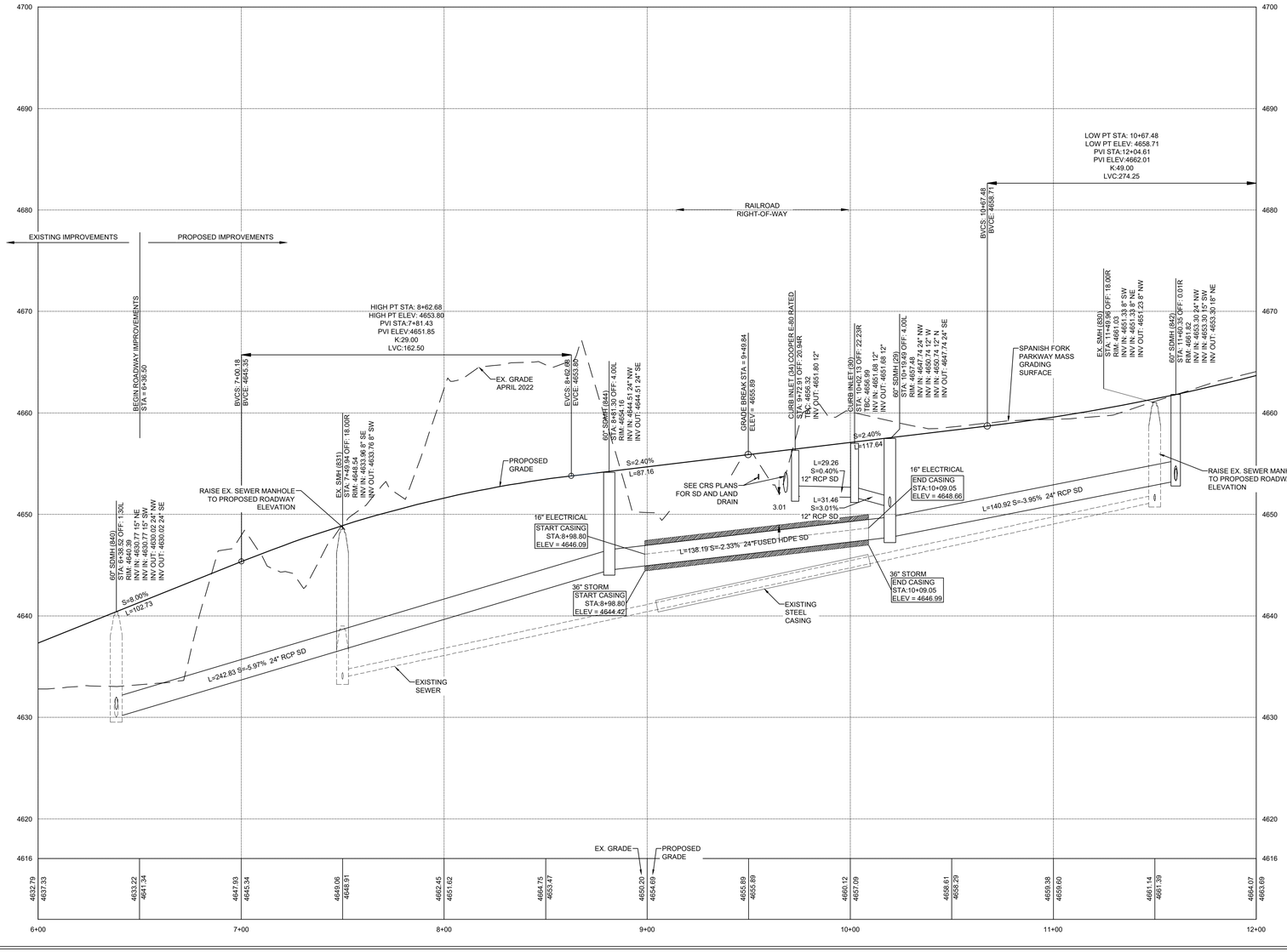


MATCHLINE - SEE SHEET C-202





ELECTRICAL BORE CASING DETAIL



CALPICO

CALPICO *MODEL M-SERIES* STAINLESS STEEL CASING INSULATOR

** POLYMER RUNNERS **

*** Model M-8-SS PM***

- Bands are 14 ga., grade 304 stainless steel.
- Runners are abrasion resistant, and are attached mechanically with bolts and the bolt heads are TIG welded to the band.
- Bolting flanges are provided for extra strength.
- An extra heavy duty vinyl liner assures double insulation.

Available band width size:

- MODEL M-8-SS PM - 8" wide band

Consult factory for literature on the 6" & 12" wide bands. Configurations: Centered & Restrained, Non-Centered & Restrained, Non-Centered & Non-Restrained, Anti-floatation available.

Avail. for 6" thru 36" Carrier Pipelines

Typical Spacing: GENERAL – 13'-14' length of carrier pipe: 2 spacers per stick, 18' – 20' length: 3 spacers per stick. Note: (Pipe with a tendency to bow, may require 3 per 13' or 4 per 18'-20'.) SOME APPLICATIONS, AND LARGE DIAMETER PIPE MAY REQUIRE ADDITIONAL SPACERS. Consult factory. Install 1' – 2' from the end of each joint & typically every 8' – 10' thereafter, or per engineer specifications; however, maximum spacing is 10' for warranty to remain in effect. Fused or welded joints (continuous run pipe - no bell), typical spacing is generally every 8' - 10'; however, this depends also on the type & size of carrier pipe, therefore, you should consult factory for recommendation.

BAND: *ASTM A240*
RISER: *ASTM A240*
LINER: *ASTM D149*
RUNNERS: *ASTM D638, 790, 785, 695, 648*

1387 San Mateo Ave.; So. San Francisco, CA 94080
650 588-2241; 1-800-998-9115; 650 873-6952 fax

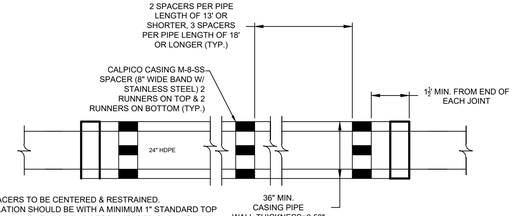
SPECIFICATIONS

Band
- 14 ga.
- grade 304 stainless steel
- 8" wide

Bolts, Nuts, & Washers
- grade 304 stainless steel
- 5/16" diameter
- 4 bolts per flange

Insulating Liner
- EPDM – 1/8"
- Hardness: 85-90 Durometer Shore A
- 1% max. water absorption
- overlapping edges

Runners
- 2.00" wide glass filled polymer
- SIZES AVAIL.: 2", 2 ½", 3", 3 ½", 4", 4 ½", 5", 5 ½"
- Length: 7.00"
- Tensile strength: 27,000 psi
- Rockwell hardness: 100
- Compression strength: 33,000 psi
- Flexural strength: 40,000 psi
- Deflection Temp. @ 264 psi: 475°F.
- Deformation under load @ 72° F: 3500 lbs.
- Coefficient of friction: 0.1



NOTES:
1. ALL SPACERS TO BE CENTERED & RESTRAINED.
2. INSTALLATION SHOULD BE WITH A MINIMUM 1" STANDARD TOP GAP (MINIMUM BUT ALSO THE RECOMMENDED GAP NEEDED TO INSTALL WITH RUNNERS LUBRICATED WITH FLEX SOAP OR DRILLING MUD. NO PETROLEUM OR GREASE SHOULD BE USED OR IT WILL DETERIORATE THE EPDM RUBBER RUNNERS.

LEI
- A Utah Corporation -
ENGINEERS
SURVEYORS
PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

REGISTERED PROFESSIONAL ENGINEER
No. 332906
BRIAN T. GABLER
05/06/2022
STATE OF UTAH

SPANISH FORK PARKWAY - PHASE 2

SPANISH FORK, UTAH

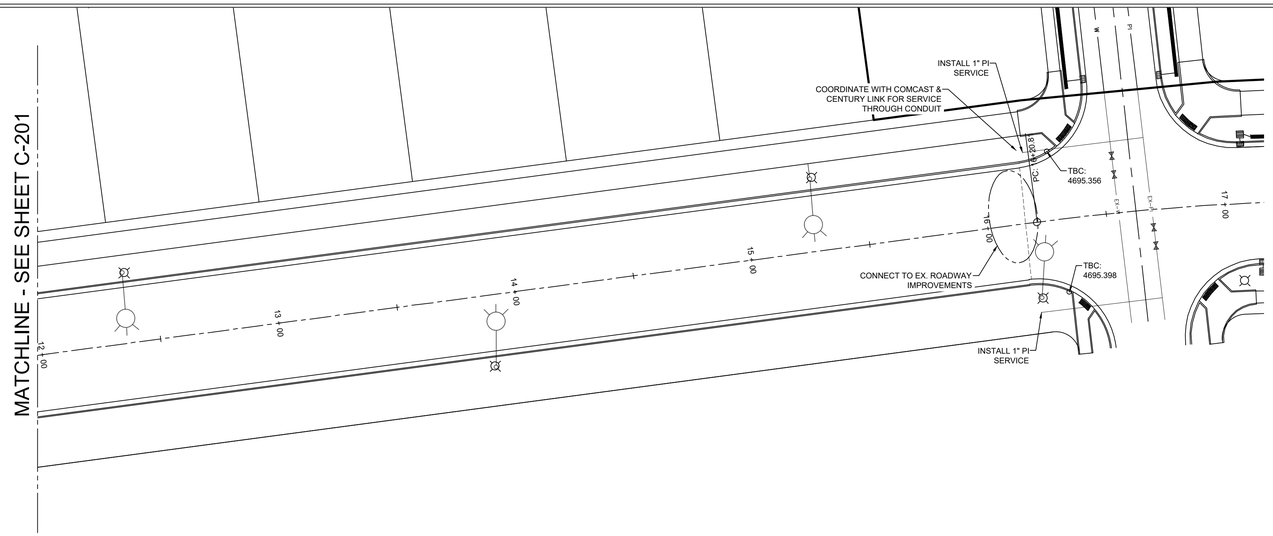
SPANISH FORK PARKWAY PLAN & PROFILE

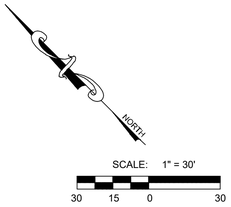
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LEI PROJECT #: 2018-0088
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SCALE: 1" = 30'
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SHEET
C-201

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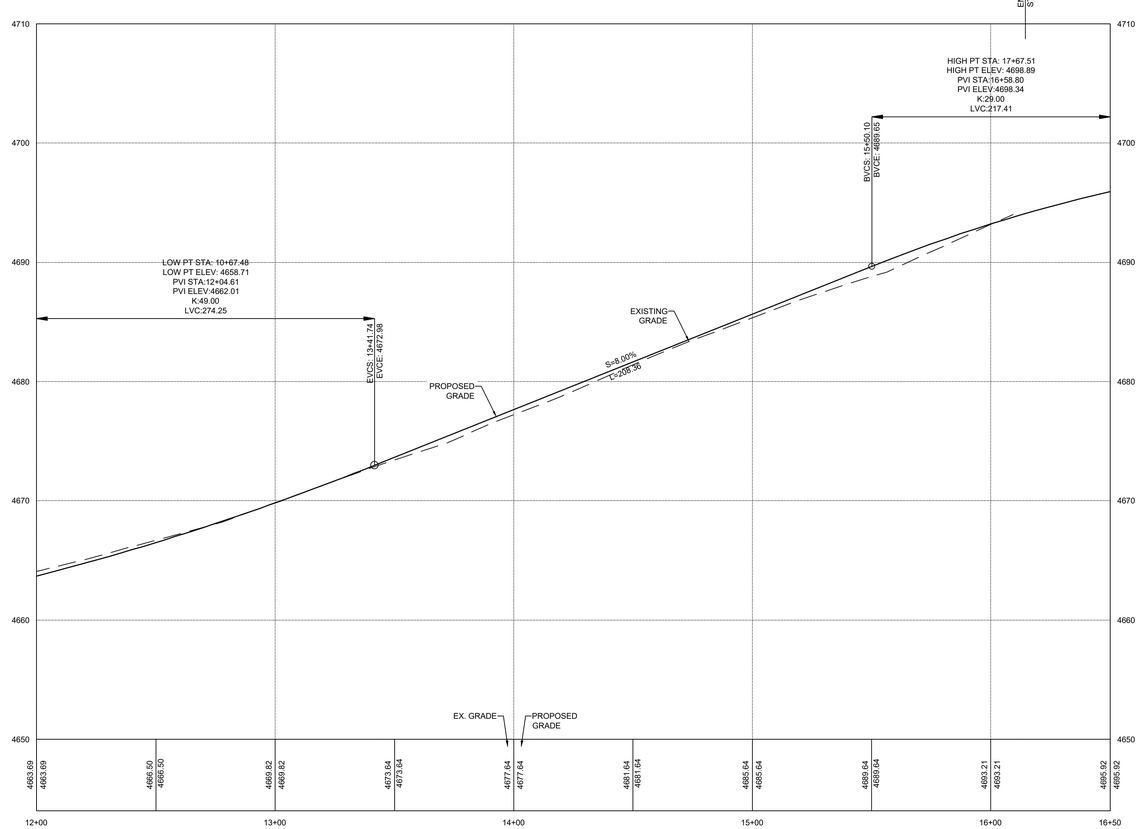




SCALE: 1" = 30'

30 15 0 30





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3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

REGISTERED PROFESSIONAL ENGINEER
No. 332906
BRIAN T. GABLER
05/06/2022
STATE OF UTAH

SPANISH FORK PARKWAY - PHASE 2

SPANISH FORK, UTAH

SPANISH FORK PARKWAY PLAN & PROFILE

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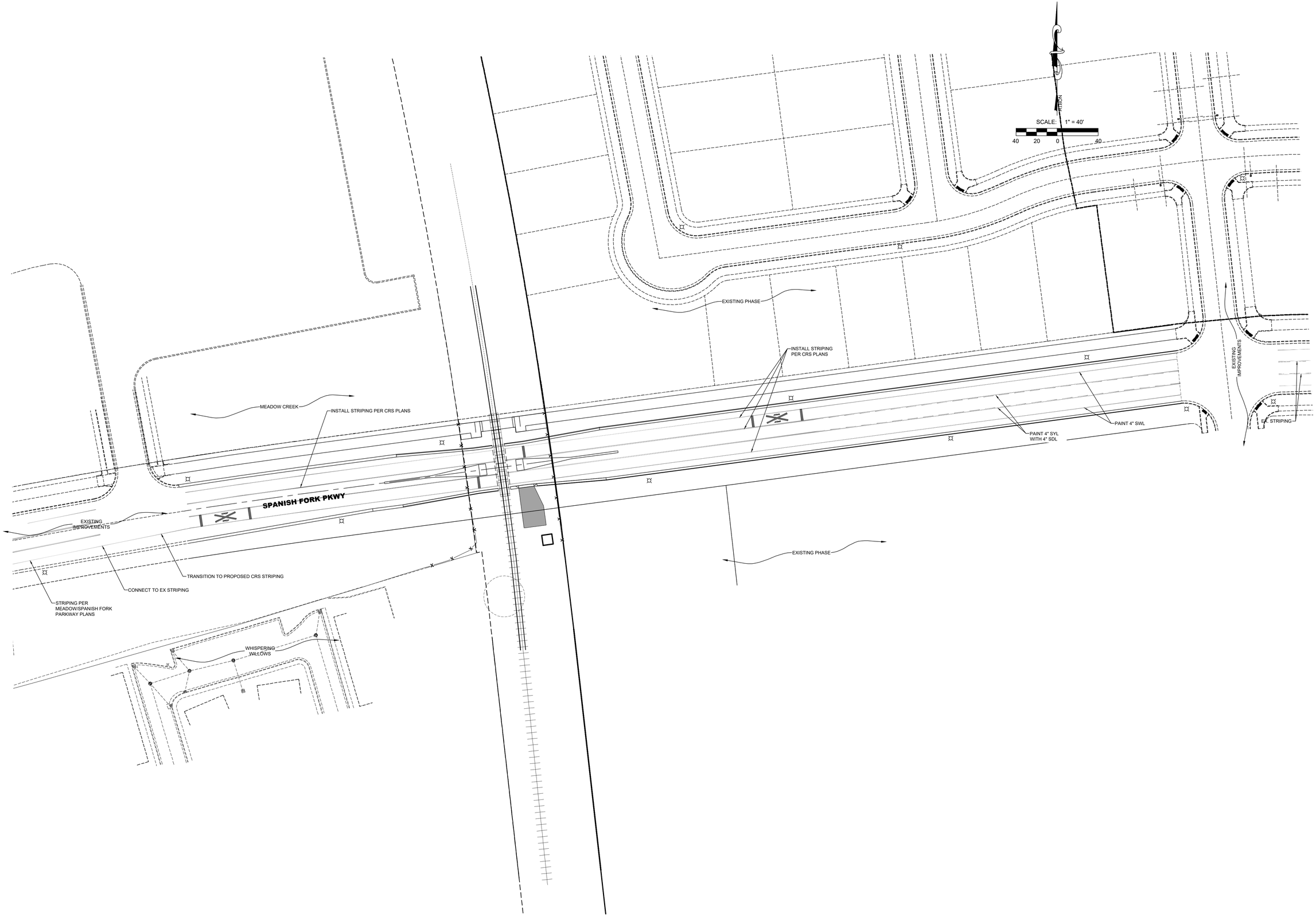
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SCALE: 1" = 30'

DATE: 05/06/2022

SHEET

C-202



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ENGINEERS
SURVEYORS
PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

REGISTERED PROFESSIONAL ENGINEER
No. 332806
BRIAN T. GABLER
05/06/2022
STATE OF UTAH

SPANISH FORK PARKWAY - PHASE 2

SPANISH FORK, UTAH

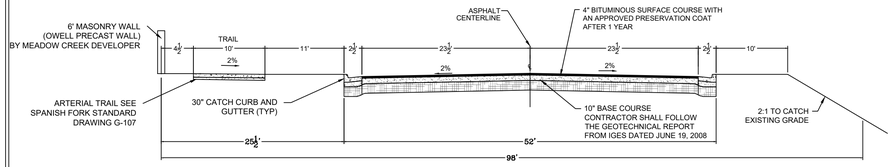
STRIPING PLAN

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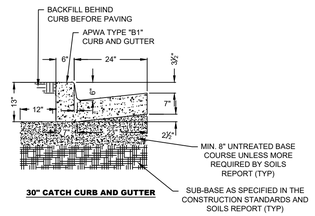
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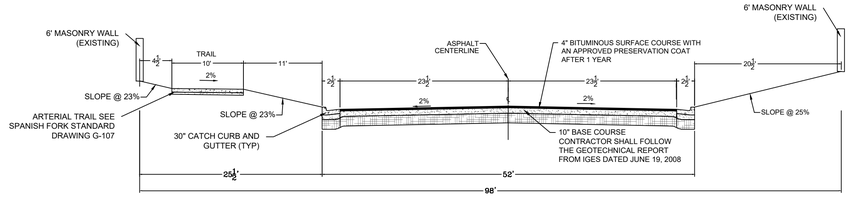


1 ROADWAY CROSS SECTION - SPANISH FORK PARKWAY (STA: 6+00 - 10+00)



30" CATCH CURB AND GUTTER

2 CURB DETAIL



3 ROADWAY CROSS SECTION - SPANISH FORK PARKWAY (STA: 10+00 - 16+21)

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3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

REGISTERED PROFESSIONAL ENGINEER
NO. 332208
BRIAN T. GABLER
05/06/2022
STATE OF UTAH

SPANISH FORK PARKWAY - PHASE 2

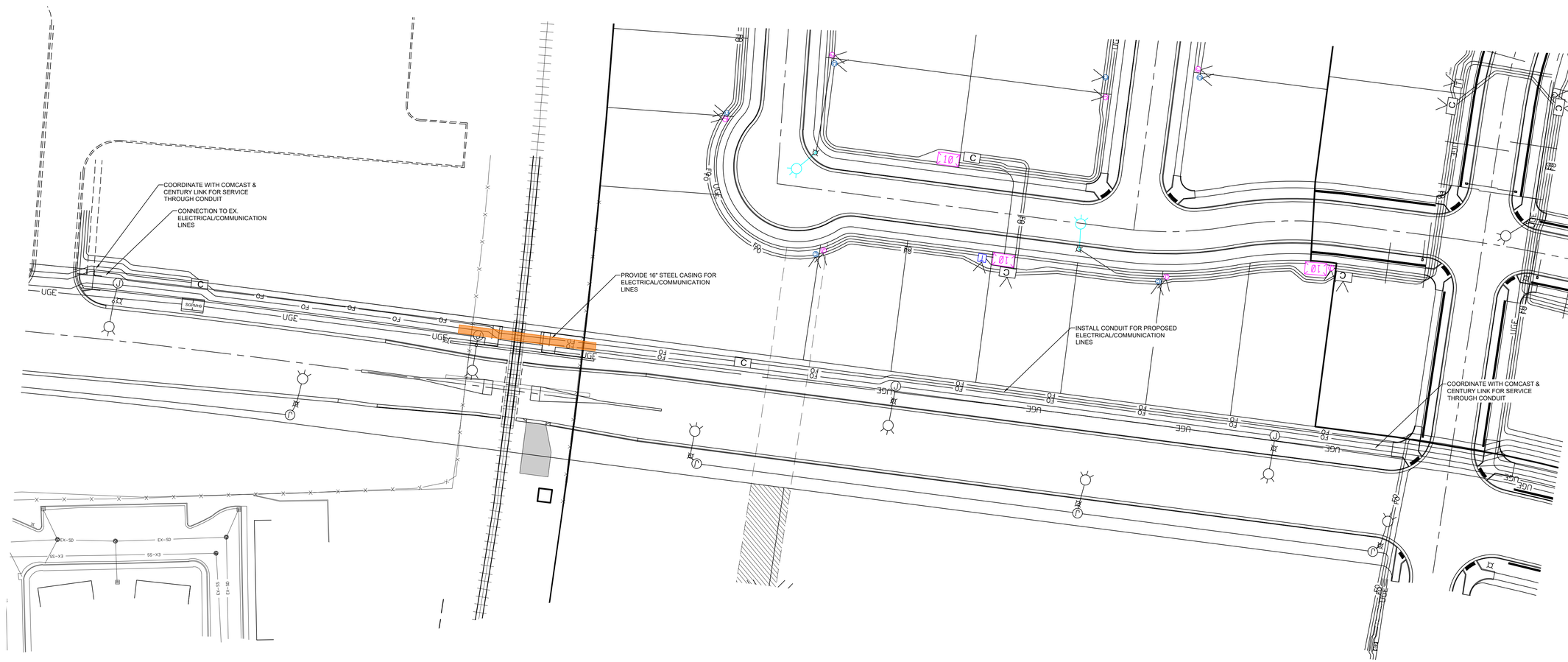
SPANISH FORK, UTAH

DETAILS

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LEI PROJECT #: 2018-0088
DRAWN BY: DSE
DESIGNED BY: BTG
SCALE: N.T.S.
DATE: 05/06/2022

SHEET
C-501



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- A Utah Corporation -
ENGINEERS
SURVEYORS
PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

NOT FOR CONSTRUCTION

SPANISH FORK PARKWAY - PHASE 2

SPANISH FORK, UTAH

ELECTRICAL PLAN

REVISIONS
1 -
2 -
3 -
4 -
5 -

LEI PROJECT #: 2018-0088
DRAWN BY: DSE
DESIGNED BY: BTG
SCALE: 1"=40'
DATE: 05/06/2022

SHEET
E-101

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ELECTRICAL LEGEND

PRIMARY ELECTRICAL CONDUIT

SECONDARY ELECTRICAL CONDUIT

SHADOW CONDUIT

SERVICE DROP

PRIMARY SECTIONALIZERS

STREETLIGHT

SECONDARY JUNCTION BOX (PEDESTAL TYPE)

TRANSFORMERS (PAD) (POLE)

ELECTRIC NOTES:

1. CONDUIT FOR STREET LIGHTS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE 4/0 KCMIL URD TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 6' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 STR CU TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)– SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED

COMMUNICATIONS LEGEND

COMMUNICATIONS CONDUIT

SHADOW CONDUIT

COMM. SERVICE DROP

COMMUNICATIONS BOXES SM M LG

SFCN NOTES:

1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPCIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)– SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATIONCONDUIT BEING INSTALLED

GENERAL NOTES:

DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS-OF-WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:

THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL, AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.

CONSTRUCTION NOTES:



FINAL SECTION OF SP FRK PRKWY

ELECTRICAL DESIGN

SFCN DESIGN

SPANISH FORK CITY ELECTRIC
260 NORTH 175 EAST
SPANISH FORK, UTAH 84660
(801) 804-4450

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SPANISH FORK POWER & LIGHT

SCALE:	1"=40'	APPROVED:		ELECTRICLAL CHECKED BY:		ELECTRICAL APPROVED BY:	DATE:
DRAWN BY:	TOM COOPER	DRAWING APPROVAL:					
DATE DRAWN:	12/21/2021	SHEET SIZE:	ARCH D	SFCN CHECKED BY:		SFCN APPROVED BY:	DATE:

HIGHWAY 51 - STATE STREET

SEE SHEET LP1

SPANISH FORK PARKWAY

SEE SHEET LP2

SEE SHEET LP3

SEE SHEET LP4

SILVERADO LANE

Symbol	Common Name	Scientific Name	Qty.	Size	Remarks
	Cleveland Select Flowering Pear	*Pyrus calleryana 'Cleveland Select'*	x	2" Cal.	Staked per detail
	European Mountain Ash	*Sorbus aucuparia*	x	2" Cal.	Staked per detail
	Tuliptree	*Liriodendron tulipifera*	x	2" Cal.	Staked per detail
	Honey Locust	*Gleditsia triacanthos 'Shademaster'*	x	2" Cal.	Staked per detail
	Rocky Mountain Juniper	*Juniperus scopulorum*	x	2" Cal.	Staked per detail
	Colorado Blue Spruce	*Picea pungens*	x	6' B&B	Staked per detail
	Peking Cotoneaster	*Cotoneaster acutifolius*	x	5 Gal.	
	Little Devil™ Ninebark	*Physocarpus opulifolius 'Donna May'*	x	5 Gal.	
	Dwarf Burning Bush	*Euonymus alatus 'Compactus'*	x	2 Gal.	
	Youngstown Andorra Juniper	*Juniperus horizontalis 'Youngstown'*	x	1 Gal.	
	Mugo Pine	*Pinus mugo ' Slomound'*	x	5 Gal.	
	Blue Mist Spirea	*Caryopteris X clandonensis 'Blue Mist"*	x	2 Gal.	
	Lemon Thyme	Thymus x citriodorus	x	6 Pack	
	Blue Rug Juniper	*Juniperus horizontalis "Wiltonii"*	x	2 Gal.	
	Decorative Boulders	Tan Limestone Boulders	x	2'-5' Dia.	1/3 Buried
	Decorative Rock Mulch	Talon's Cove Crushed Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Decorative Rock Mulch	Cherokee Red Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Turf Grass	Dwarf Tall Fescue	x Sq./Ft	N/A	
	Concrete Edging	6" Concrete Edge/Mow Curb	x Lin./Ft	6" Width	

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REVISION			

LANDSCAPE PLANS

SPANISH FORK PARKWAY PHASE II LANDSCAPE PLANS

SPANISH FORK, UT

PROJ. #: Fx. 22190
DRAWN BY: MJM
DESIGN BY: JP
CHECKED BY: JP

SHEET

LP1

SPANISH FORK PARKWAY

HIGHWAY 51 - STATE STREET

SEE SHEET LP3 FOR CONTINUATION

Symbol	Common Name	Scientific Name	Qty.	Size	Remarks
	Cleveland Select Flowering Pear	*Pyrus calleryana 'Cleveland Select'*	x	2" Cal.	Staked per detail
	European Mountain Ash	*Sorbus aucuparia*	x	2" Cal.	Staked per detail
	Tuliptree	*Liriodendron tulipifera*	x	2" Cal.	Staked per detail
	Honey Locust	*Gleditsia triacanthos 'Shademaster'*	x	2" Cal.	Staked per detail
	Rocky Mountain Juniper	*Juniperus scopulorum*	x	2" Cal.	Staked per detail
	Colorado Blue Spruce	*Picea pungens*	x	6' B&B	Staked per detail
	Peking Cotoneaster	*Cotoneaster acutifolius*	x	5 Gal.	
	Little Devil™ Ninebark	*Physocarpus opulifolius 'Donna May'*	x	5 Gal.	
	Dwarf Burning Bush	*Euonymus alatus 'Compactus'*	x	2 Gal.	
	Youngstown Andorra Juniper	*Juniperus horizontalis 'Youngstown'*	x	1 Gal.	
	Mugo Pine	*Pinus mugo ' Slomound'*	x	5 Gal.	
	Blue Mist Spirea	*Caryopteris X clandonensis 'Blue Mist"*	x	2 Gal.	
	Lemon Thyme	Thymus x citriodorus	x	6 Pack	
	Blue Rug Juniper	*Juniperus horizontalis "Wiltonii"*	x	2 Gal.	
	Decorative Boulders	Tan Limestone Boulders	x	2'-5' Dia.	1/3 Buried
	Decorative Rock Mulch	Talon's Cove Crushed Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Decorative Rock Mulch	Cherokee Red Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Turf Grass	Dwarf Tall Fescue	x Sq./Ft	N/A	
	Concrete Edging	6" Concrete Edge/Mow Curb	x Lin./Ft	6" Width	

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LANDSCAPE PLANS

SPANISH FORK PARKWAY PHASE II LANDSCAPE PLANS

SPANISH FORK, UT

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SHEET
LP2

SPANISH FORK PARKWAY

SGPMH9

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LD

EX-SD

EX-SS

SEE SHEET LP2 FOR CONTINUATION

SEE SHEET LP4 FOR CONTINUATION

N

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15

Symbol	Common Name	Scientific Name	Qty.	Size	Remarks
	Cleveland Select Flowering Pear	*Pyrus calleryana 'Cleveland Select'*	x	2" Cal.	Staked per detail
	European Mountain Ash	*Sorbus aucuparia*	x	2" Cal.	Staked per detail
	Tuliptree	*Liriodendron tulipifera*	x	2" Cal.	Staked per detail
	Honey Locust	*Gleditsia triacanthos 'Shademaster'*	x	2" Cal.	Staked per detail
	Rocky Mountain Juniper	*Juniperus scopulorum*	x	2" Cal.	Staked per detail
	Colorado Blue Spruce	*Picea pungens*	x	6' B&B	Staked per detail
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	Dwarf Burning Bush	*Euonymus alatus 'Compactus'*	x	2 Gal.	
	Youngstown Andorra Juniper	*Juniperus horizontalis 'Youngstown'*	x	1 Gal.	
	Mugo Pine	*Pinus mugo ' Slomound'*	x	5 Gal.	
	Blue Mist Spirea	*Caryopteris X clandonensis 'Blue Mist"*	x	2 Gal.	
	Lemon Thyme	Thymus x citriodorus	x	6 Pack	
	Blue Rug Juniper	*Juniperus horizontalis "Wiltonii"*	x	2 Gal.	
	Decorative Boulders	Tan Limestone Boulders	x	2'-5' Dia.	1/3 Buried
	Decorative Rock Mulch	Talon's Cove Crushed Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Decorative Rock Mulch	Cherokee Red Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Turf Grass	Dwarf Tall Fescue	x Sq./Ft	N/A	
	Concrete Edging	6" Concrete Edge/Mow Curb	x Lin./Ft	6" Width	

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LANDSCAPE PLANS

SPANISH FORK PARKWAY PHASE II LANDSCAPE PLANS

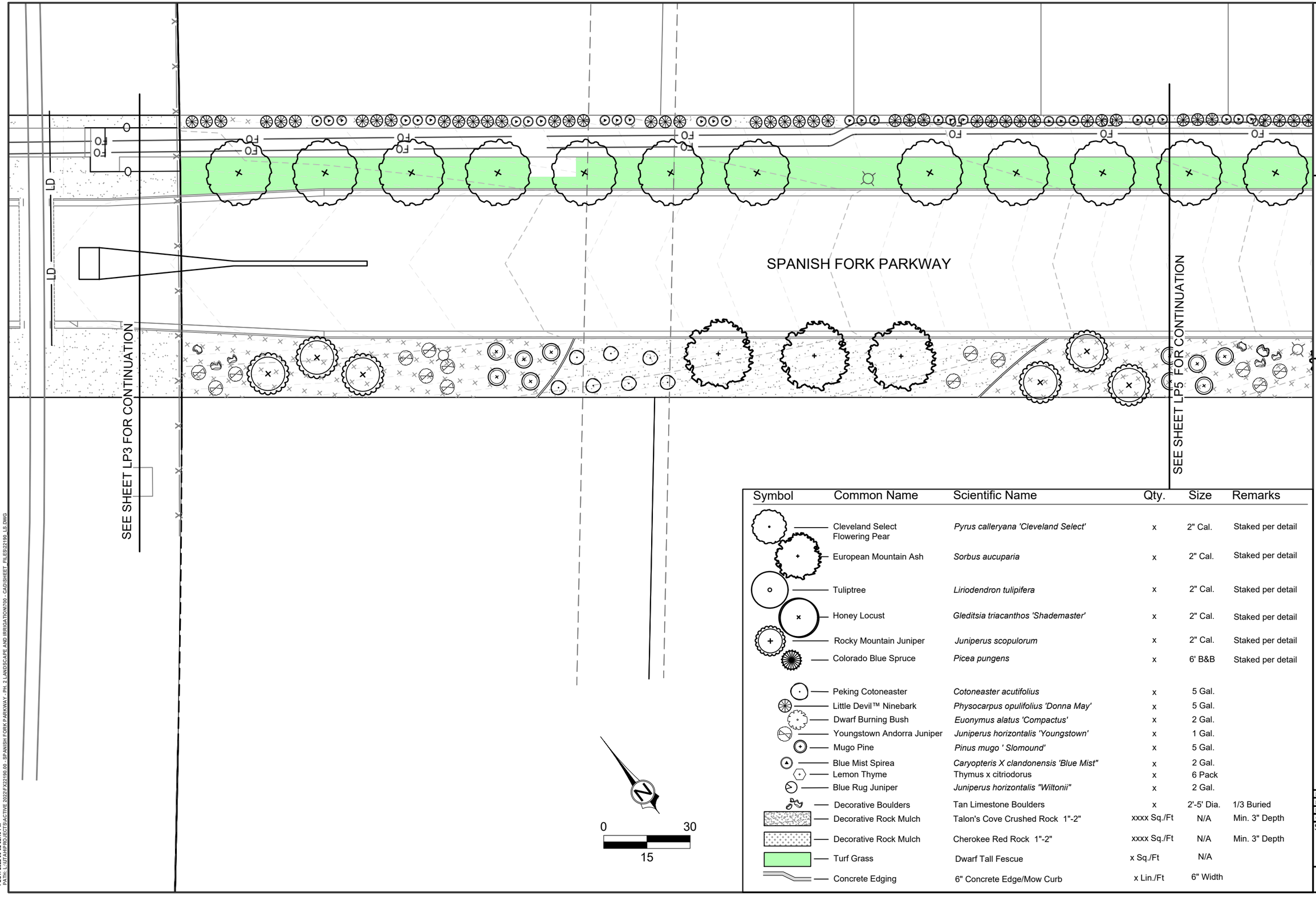
SPANISH FORK, UT

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DESIGN BY: JP
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LP3

3 OF 16

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Symbol	Common Name	Scientific Name	Qty.	Size	Remarks
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	European Mountain Ash	*Sorbus aucuparia*	x	2" Cal.	Staked per detail
	Tuliptree	*Liriodendron tulipifera*	x	2" Cal.	Staked per detail
	Honey Locust	*Gleditsia triacanthos 'Shademaster'*	x	2" Cal.	Staked per detail
	Rocky Mountain Juniper	*Juniperus scopulorum*	x	2" Cal.	Staked per detail
	Colorado Blue Spruce	*Picea pungens*	x	6' B&B	Staked per detail
	Peking Cotoneaster	*Cotoneaster acutifolius*	x	5 Gal.	
	Little Devil™ Ninebark	*Physocarpus opulifolius 'Donna May'*	x	5 Gal.	
	Dwarf Burning Bush	*Euonymus alatus 'Compactus'*	x	2 Gal.	
	Youngstown Andorra Juniper	*Juniperus horizontalis 'Youngstown'*	x	1 Gal.	
	Mugo Pine	*Pinus mugo ' Slomound'*	x	5 Gal.	
	Blue Mist Spirea	*Caryopteris X clandonensis 'Blue Mist"*	x	2 Gal.	
	Lemon Thyme	Thymus x citriodorus	x	6 Pack	
	Blue Rug Juniper	*Juniperus horizontalis "Wiltonii"*	x	2 Gal.	
	Decorative Boulders	Tan Limestone Boulders	x	2'-5' Dia.	1/3 Buried
	Decorative Rock Mulch	Talon's Cove Crushed Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Decorative Rock Mulch	Cherokee Red Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Turf Grass	Dwarf Tall Fescue	x Sq./Ft	N/A	
	Concrete Edging	6" Concrete Edge/Mow Curb	x Lin./Ft	6" Width	

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LANDSCAPE PLANS

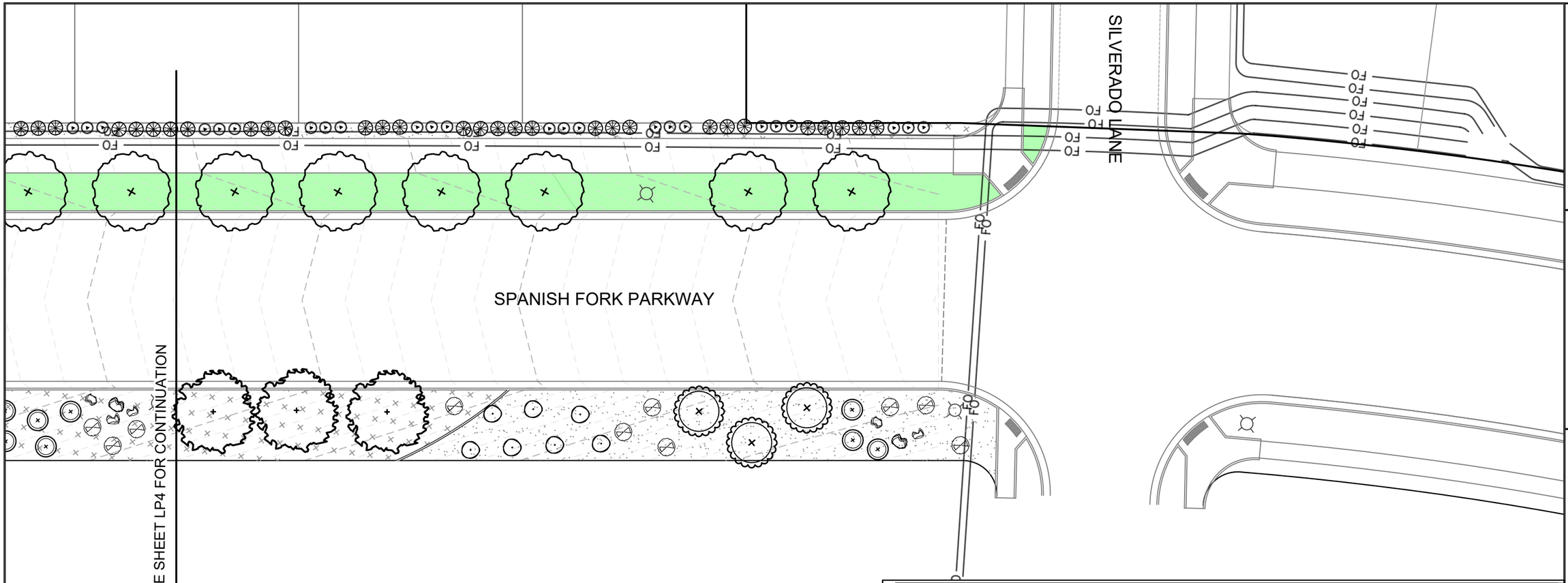
SPANISH FORK PARKWAY PHASE II LANDSCAPE PLANS

SPANISH FORK, UT

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Symbol	Common Name	Scientific Name	Qty.	Size	Remarks
	Cleveland Select Flowering Pear	*Pyrus calleryana 'Cleveland Select'*	x	2" Cal.	Staked per detail
	European Mountain Ash	*Sorbus aucuparia*	x	2" Cal.	Staked per detail
	Tuliptree	*Liriodendron tulipifera*	x	2" Cal.	Staked per detail
	Honey Locust	*Gleditsia triacanthos 'Shademaster'*	x	2" Cal.	Staked per detail
	Rocky Mountain Juniper	*Juniperus scopulorum*	x	2" Cal.	Staked per detail
	Colorado Blue Spruce	*Picea pungens*	x	6' B&B	Staked per detail
	Peking Cotoneaster	*Cotoneaster acutifolius*	x	5 Gal.	
	Little Devil™ Ninebark	*Physocarpus opulifolius 'Donna May'*	x	5 Gal.	
	Dwarf Burning Bush	*Euonymus alatus 'Compactus'*	x	2 Gal.	
	Youngstown Andorra Juniper	*Juniperus horizontalis 'Youngstown'*	x	1 Gal.	
	Mugo Pine	*Pinus mugo ' Slomound'*	x	5 Gal.	
	Blue Mist Spirea	*Caryopteris X clandonensis 'Blue Mist"*	x	2 Gal.	
	Lemon Thyme	Thymus x citriodorus	x	6 Pack	
	Blue Rug Juniper	*Juniperus horizontalis "Wiltonii"*	x	2 Gal.	
	Decorative Boulders	Tan Limestone Boulders	x	2'-5' Dia.	1/3 Buried
	Decorative Rock Mulch	Talon's Cove Crushed Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Decorative Rock Mulch	Cherokee Red Rock 1"-2"	xxxx Sq./Ft	N/A	Min. 3" Depth
	Turf Grass	Dwarf Tall Fescue	x Sq./Ft	N/A	
	Concrete Edging	6" Concrete Edge/Mow Curb	x Lin./Ft	6" Width	

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LANDSCAPE PLANS

SPANISH FORK PARKWAY PHASE II LANDSCAPE PLANS

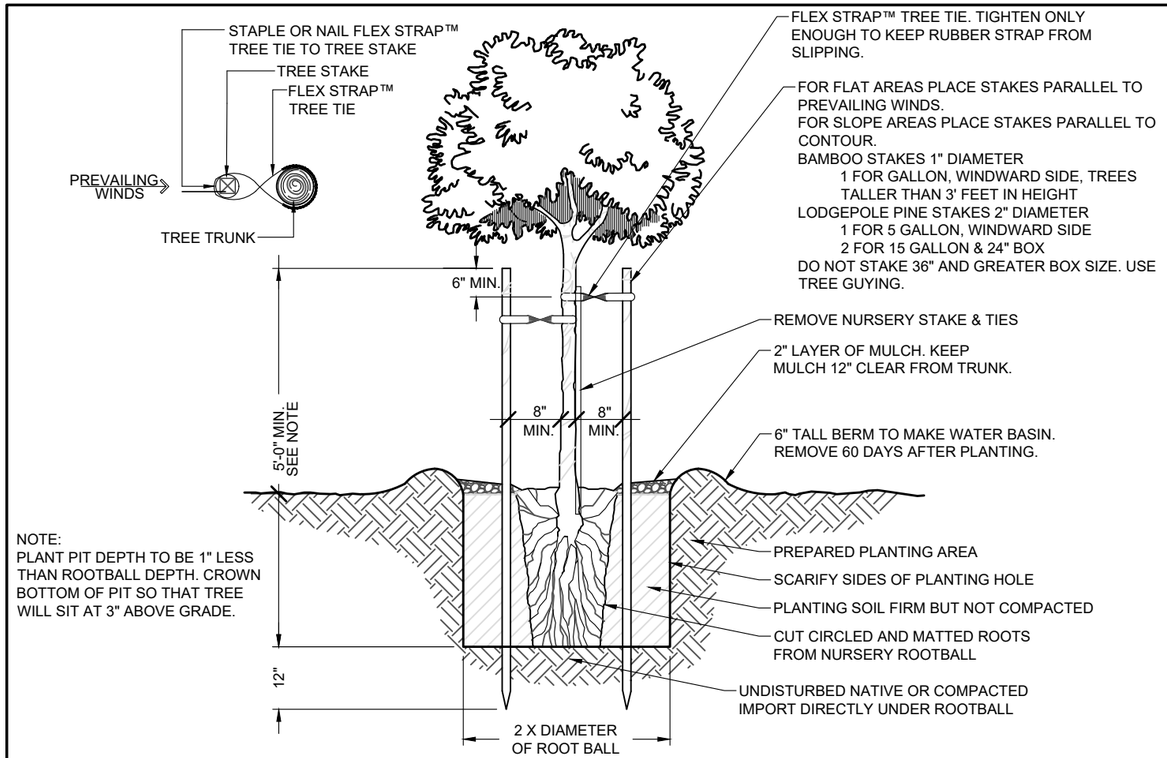
SPANISH FORK, UT

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CHECKED BY: JP

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LP5

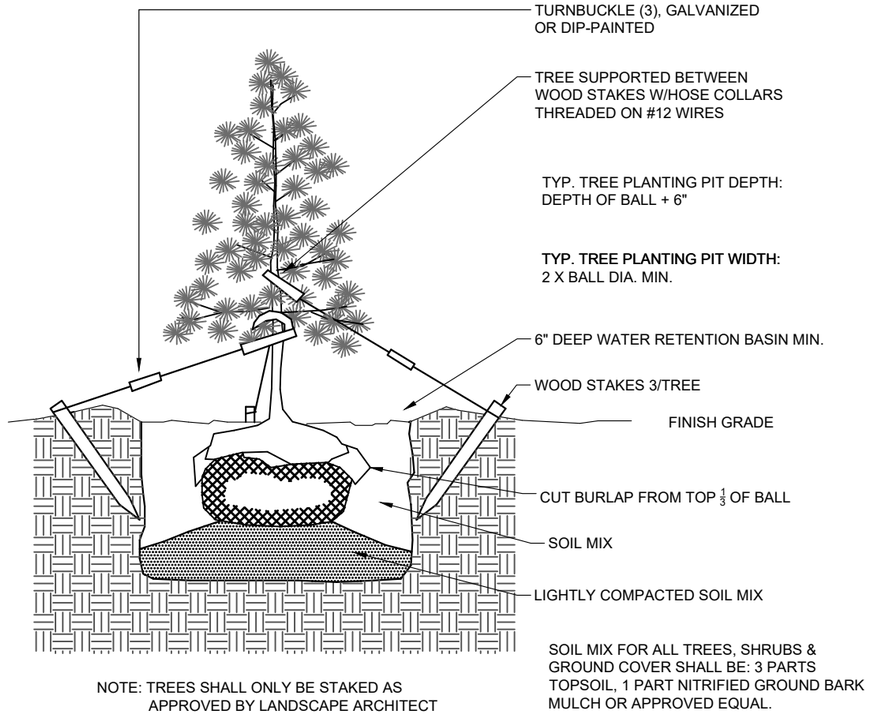
5 OF 16

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1 DETAIL - TREE PLANTING & STAKING

NOT TO SCALE



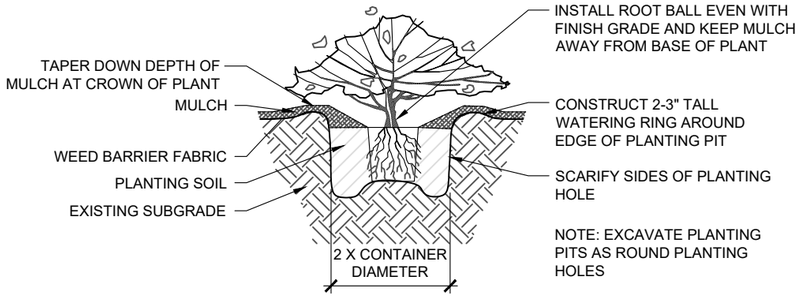
NOTE: TREES SHALL ONLY BE STAKED AS APPROVED BY LANDSCAPE ARCHITECT

SOIL MIX FOR ALL TREES, SHRUBS & GROUND COVER SHALL BE: 3 PARTS TOPSOIL, 1 PART NITRIFIED GROUND BARK MULCH OR APPROVED EQUAL.

2 DETAIL - CONIFER TREE PLANTING & STAKING

NOT TO SCALE

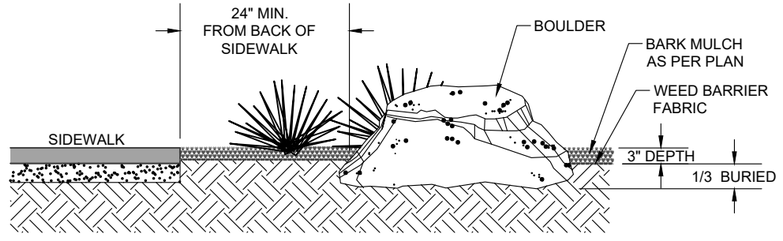
NOTES:
1. SOIL MIX FOR ALL TREES, SHRUBS & GROUND COVER SHALL BE: 3 PARTS TOPSOIL, 1 PART NITRIFIED GROUND BARK MULCH OR APPROVED EQUAL.
2. INSTALL LANDSCAPE WEED BARRIER FABRIC SHALL BE INSTALLED BETWEEN SOIL AND ALL MULCH AREAS.



3 DETAIL - SHRUB PLANTING

NOT TO SCALE

DECORATIVE BOULDER NOTES:
1. INSTALL LANDSCAPE WEED BARRIER FABRIC BETWEEN SOIL AND ALL DECORATIVE BOULDERS.



4 DETAIL - DECORATIVE BOULDER LOCATION AND PLACEMENT

NOT TO SCALE

CivilScience

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NO.	DESCRIPTION	BY	DATE

LANDSCAPE PLANS

SPANISH FORK PARKWAY PHASE II LANDSCAPE PLANS

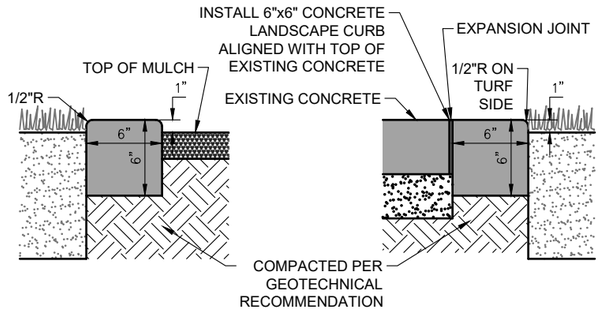
SPANISH FORK, UT

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DESIGN BY: JP
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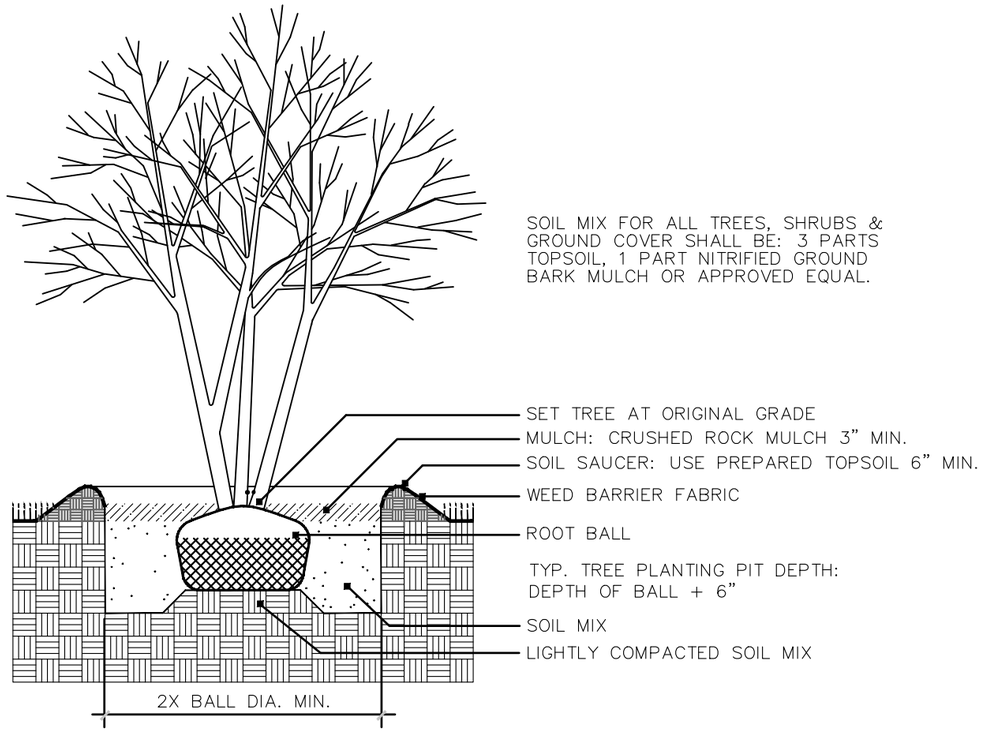
LANDSCAPE CURB NOTES:

1. EXPANSION JOINTS SHALL HAVE 20' MAXIMUM SPACING.
2. SCORE JOINTS SHALL HAVE 5' MAXIMUM SPACING.



1 DETAIL - 6" LANDSCAPE CURB

NOT TO SCALE



2 MULTI-STEM TREE PLANTING

Not to Scale

LANDSCAPE NOTES:

1. LANDSCAPE AREAS ARE DEFINED AS ALL NON-PAVED AREAS DISTURBED BY CONSTRUCTION. SLIGHT VARIATIONS MAY EXIST BETWEEN ON-SITE CONDITIONS AND DRAWINGS. CONTRACTOR SHALL ADJUST PLANTING LAYOUT AS REQUIRED TO MAINTAIN PLANT QUANTITIES AND DESIGN INTENT.
2. THE LANDSCAPE ARCHITECT/ OWNER'S REPRESENTATIVE SHALL APPROVE ANY AND ALL SUBSTITUTIONS.
3. LOCATE PLANTS AWAY FROM OBSTACLES SUCH AS FIRE HYDRANTS, TRANSFORMERS, AND LIGHT FIXTURES.
4. ALL PLANT MATERIAL SHALL MEET INDUSTRY STANDARDS. THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE RESERVES THE RIGHT TO REFUSE ANY PLANT MATERIALS DEEMED UNACCEPTABLE.
5. ALL STAKING OF TREES SHALL BE AS APPROVED BY LANDSCAPE ARCHITECT. ALL TREES TO BE STAKED SHALL BE STAKED OUTSIDE ROOTBALL, SEE TREE STAKING DETAIL FOR MORE INFORMATION. TREES SHALL BE A MINIMUM OF 3' FROM CURB OR SIDEWALK, SHRUBS SHALL BE 2' OR MORE AWAY FROM CURBS OR SIDEWALKS. REFER TO PLANS AND MAINTAIN SHRUB MASSING AS SHOWN AWAY FROM HARDSCAPE.
6. TREE LOCATIONS SHALL BE FLAGGED OR STAKED FOR REVIEW PRIOR TO STARTING IRRIGATION OR PLANTING EXCAVATION. MINOR RELOCATION'S SHALL BE MADE AT THIS TIME TO AVOID UNSUITABLE CONDITIONS, AT NO ADDITIONAL COST.
7. INSTALL WEED BARRIER FABRIC BELOW ALL ROCK MULCHED LANDSCAPE AREAS. INSTALL FABRIC AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
8. SOIL MIX FOR ALL TREES, SHRUBS, & GROUND COVER SHALL BE : 3 PARTS TOPSOIL, 1 PART NUTRIFIED GROUND BARK MULCH OR APPROVED EQUAL.
9. ROCK MULCH PRODUCTS SHOULD BE SOURCED LOCALLY. IF UNAVAILABLE LOCALLY, THEY CAN BE OBTAINED FROM SUPPLIER ROWLAND STONE - 1203 WEST SUNSET BLVD ST. GEORGE, UTAH 84770. PHONE: (435) 673-2349. CONTACT SUPPLIER FOR PRICES AND AVAILABILITY. ALL SUBSTITUTIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
10. GRANULAR TOPDRESSING / ROCK MULCH SHALL EXTEND UNDER SHRUBS AND RAKED UNIFORMLY ALONG CURBS, SIDEWALKS AND WALLS.
11. GRADE NOTED ON LANDSCAPE PLAN SHALL BE FIELD VERIFIED/APPROVED BY LANDSCAPE ARCHITECT AND MODIFIED AS NECESSARY PRIOR TO CONCRETE HEADER/ MOW CURB INSTALLATION.
12. REFER TO GENERAL CONSTRUCTION NOTES FOR ADDITIONAL CONSIDERATIONS THAT RELATE TO SCOPE OF WORK WITHIN THIS SECTION.

MAINTENANCE & GUARANTEE:

1. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE FIVE (5) DAYS PRIOR TO COMPLETING IMPROVEMENTS IN ACCORDANCE WITH PLANS AND SPECIFICATIONS TO REQUEST AN INSPECTION FOR SUBSTANTIAL COMPLETION. LANDSCAPE ARCHITECT SHALL PREPARE PUNCHLIST OF ALL WORK REQUIRING CORRECTION. MAINTENANCE PERIOD SHALL BEGIN WHEN ALL PUNCHLIST ITEMS ARE CORRECTED.
2. PLANTS NOT IN HEALTHY CONDITION OVER A ONE YEAR WARRANTY PERIOD SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
3. PROVIDE ONE (1) YEAR WRITTEN GUARANTEE TO WARRANT WATER FEATURE, IRRIGATION SYSTEM AND ALL TREES FROM ACCEPTANCE DATE.
4. IN ORDER TO PROTECT HIS GUARANTEE, LANDSCAPE CONTRACTOR SHALL GIVE PRINTED MAINTENANCE INSTRUCTIONS FOR THE YEARLY CARE AND FEEDING OF THE LANDSCAPE.
5. AS BUILT DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR FOR ACTUAL AS BUILT CONDITIONS ON SITE AS IT RELATES TO THE LANDSCAPE AND IRRIGATION SYSTEM. THESE PLANS SHALL BE SUBMITTED TO THE OWNER AT FINAL INSPECTION.

GENERAL CONSTRUCTION NOTES:

1. NOTES SHALL BE USED FOR GENERAL REFERENCE IN CONJUNCTION WITH ALL WORK ELEMENTS SHOWN ON THE ENCLOSED PLANS.
2. VERIFY CRITICAL DIMENSIONS, REFERENCE POINT LOCATIONS, AND CONSTRUCTION CONDITIONS PRIOR TO INITIATING WORK. NOTIFY OWNER'S REPRESENTATIVE SHOULD CONFLICTS ARISE.
3. REFER TO ENGINEERING PLANS FOR CONSTRUCTION AND GRADING CONSIDERATIONS OF THE SITE. CROSS REFERENCE WORK THAT MAY IMPACT IMPROVEMENTS SHOWN ON THESE DOCUMENTS.
4. LANDSCAPE CONTRACTOR SHALL ACCEPT THE SITE AND ALL GRADING AT +/- 3"
5. CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS BEFORE CONSTRUCTION.
6. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, AND/OR FEDERAL LAWS PERTAINING TO THE PROJECT'S WORK.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL CONSTRUCTION ELEMENTS WITH OTHER TRADES PRIOR TO INSTALLATION AND BECOME FAMILIAR WITH THE LOCATIONS OF UNDERGROUND SERVICES AND IMPROVEMENTS.
8. THE CONTRACTOR SHALL EXAMINE THE SITE AND FULLY DETERMINE THE CONDITIONS UNDER THIS CONTRACT. NO ALLOWANCE WILL BE MADE FOR FAILURE OF BIDDERS TO ASCERTAIN ALL ASPECTS OF THE PROJECT.
9. PRIOR TO DIGGING, EXCAVATION, OR UNDERGROUND WORK, CONTRACTOR SHALL CONTACT BLUESTAKES TO LOCATE AND PROTECT EXISTING UTILITIES AND SUBSURFACE SYSTEMS. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR REPAIR AND EXPENSES INCURRED TO UTILITIES THAT BECOME DAMAGED AS A RESULT OF HIS WORK.
10. CONTRACTOR SHALL INSPECT WITH OWNER'S REPRESENTATIVE ALL PAVEMENT, SIDEWALK AND CURB DEFECTS PRIOR TO BEGINNING WORK. ALL HARDSCAPE SHALL BE RE-INSPECTED DURING FINAL INSPECTION. ANY DAMAGED AREAS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE QUANTITIES AND MATERIALS REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GRADES AS ESTABLISHED BY THE PROJECT ENGINEER. RUNOFF AND DRAINAGE FLOWS SHALL NOT BE ALTERED OR IMPEDED.
13. THE CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, EQUIPMENT, MATERIALS, EMPLOYEE, AND SUBCONTRACTOR SUPERVISION FOR IT'S PORTION OF THE PROJECT TO IMPLEMENT PLANS AND SPECIFICATIONS.
14. THE CONTRACTOR ASSUMES ALL RISKS IN THE PERFORMANCE OF THE WORK AND RE-RESPONSIBILITY FOR LOSS AND EXPENSE RESULTING FROM ON-SITE INJURY.
15. THE CONTRACTOR IS RESPONSIBLE FOR SUPERVISION, SAFETY, ADMINISTRATION SCHEDULING, COORDINATION AND MANAGEMENT OF SUBCONTRACTORS.
16. THE CONTRACTOR SHALL PROTECT ALL PERSONS NEAR OR ON THE PREMISES FROM UNREASONABLE RISK OF INJURY. PROVIDE WARNING SIGNS, LIGHTS, BARRICADES, RAILINGS, FLAGMEN OR OTHER NECESSARY SAFEGUARD.
17. THE CONSULTANTS INSPECTIONS SHALL NOT BE DEEMED SUPERVISION OR CONTROL OF CONSTRUCTION BY CONTRACTOR OR SUBCONTRACTORS.
18. ALL CONTRACTS SHALL BE WRITTEN DIRECTLY BETWEEN CONTRACTOR AND THE OWNER. SPECIFIC TERMS OF WORK SHALL BE NEGOTIATED DIRECTLY BETWEEN PARTIES. THE CONSULTANT SHALL NOT BE RESPONSIBLE FOR DISCREPANCIES IN CONTRACT, PAYMENT AMOUNTS, SCHEDULE OR QUALITY OF WORKMANSHIP.
19. IF REQUIRED AS PART OF THE AGREED SCOPE OF WORKS, THE CONSULTANT AGREES TO REVIEW SHOP DRAWINGS, PRODUCT DATA AND SAMPLE SUBMITTED BY THE CONTRACTOR AS PART OF A CONSTRUCTION ADMINISTRATION CONTRACT FOR THE SOLE PURPOSE OF COMPLIANCE WITH THE DESIGN CONCEPT AND WITH INFORMATION GIVEN NOT BEEN REVIEWED AND AUTHORIZED IN WRITING.
20. WHERE TWO OR MORE REQUIREMENTS CREATE OVERLAPPING CONDITIONS, CONFLICTING, MINIMUMS OR LEVELS OF QUALITY, THE MORE STRINGENT REQUIREMENTS OR THE HIGHER QUALITY LEVEL IS INTENDED, AND SHALL BE ENFORCED. CONFLICTING REQUIREMENTS SHALL B REFERRED TO THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE WHOSE INTERPRETATION SHALL BE FINAL.

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NO.	DESCRIPTION	BY AOR	DATE
REVISION			

LANDSCAPE PLANS

SPANISH FORK PARKWAY PHASE II LANDSCAPE PLANS

SPANISH FORK, UT

PROJ. #: Fx. 22190
DRAWN BY: MJM
DESIGN BY: JP
CHECKED BY: JP

SHEET
LP7