NORTH OGDEN CITY CORPORATION

2022-2023 SIDEWALK REPLACEMENT PROJECTS

CONTRACT DOCUMENTS,
SPECIFICATIONS AND DRAWINGS

November 2022

NORTH OGDEN CITY

SETTLED 1851

TABLE OF CONTENTS

for

CONTRACT DOCUMENTS FOR CONSTRUCTION OF

2022-2023 SIDEWALK REPLACEMENT PROJECTS

for

NORTH OGDEN CITY CORPORATION

PART 1. LEGAL AND PROCEDURAL DOCUMENTS

Section		Page
1.1	Advertisement	1.1
1.2	Project Information	1.2
1.3	Information for Bidder	1.3
1.4	Proposal (also choosing by advantages info)	1.5
1.5	Bid Bond	1.13
1.6	E-Verify Affidavit	1.14
1.7	Contract	1.15
1.8	Payment Bond	1.16
1.9	Performance Bond	1.17

PART 2. GENERAL CONDITIONS OF THE CONTRACT
(NSPE/ACEC Document C-700)
Supplementary Conditions

PART 3. SPECIAL CONDITIONS

Section		
3.1	Special Project Conditions	3.1
3.2	Measurement and Payment	3.4

PART 4. TECHNICAL SPECIFICATIONS

Section		
4.3	Earthwork	4.1
4.5	Portland Cement Concrete	4.3
4.15	Restoration of Surface Improvements	4.8

PART 5. DRAWINGS

ADVERTISEMENT FOR BID
NORTH OGDEN CITY – 2022-2023 SIDEWALK REPLACEMENT PROJECTS

Sealed bids will be received at the North Ogden City Recorders Office, 505 East 2600 North, North Ogden City, Utah until 2:00 p.m. on December 12, 2022, for the **2022-2023 SIDEWALK REPLACEMENT PROJECTS at** which time bids will be opened publicly. The work consists of the removal and replacement of approximately 960 square feet of 4" thick sidewalk and approximately 110 lineal feet of curb & gutter in various locations throughout the City. All work covered in the contract documents shall be completed by **JUNE 30, 2023.**

Contract Documents at the office of the Engineer; upon application and payment of a $40.00 non-refundable fee. Each bid shall be accompanied by a certified check, cashier's check or bid bond in the amount of five percent (5%) of the total bid price payable to NORTH OGDEN CITY CORPORATION. The Owner reserves the right to reject any or all bids, to waive any informality in a bid, and to make awards in the interest of the owner. Contract will be awarded using the **"Choosing by Advantages Decision Making System"**.

By: Susan Nance, City Recorder
NORTH OGDEN CITY CORPORATION

Published:

PROJECT INFORMATION

2022-2023 SIDEWALK REPLACEMENT PROJECTS

NORTH OGDEN CITY CORPORATION

RECEIPT OF BIDS: Sealed bids will be received at the North Ogden City Recorders Office, 505 East 2600 North, North Ogden City, Utah until 2:00 p.m. on December 12,2022, for the **2022-2023 SIDEWALK REPLACEMENT PROJECTS**.

DESCRIPTION OF WORK: The work consists of the removal and replacement of approximately 960 square feet of 4" thick sidewalk and remove & replace 110 l.f. of existing curb & gutter.

LOCATION OF THE WORK: Various locations throughout the City.

COMPLETION OF THE WORK: The work shall be completed by June 30, 2023.

OBTAINING CONTRACT DOCUMENTS: Contract Documents, including Drawings and Technical Specifications, may be obtained or at the office of the Engineer; upon application and payment of a $40.00 non-refundable fee. Each bid shall be accompanied by a certified check, cashier's check or bid bond in the amount of five percent (5%) of the total bid price payable to NORTH OGDEN CITY CORPORATION.

WAITING PERIOD BEFORE AWARD: A waiting period of 30 calendar days from the date of opening of bids to award of contract may be required. Bidder's shall assume full responsibility for and shall guarantee the bid price during this period and make certain the time period is stated in and does not restrict the proposal guarantee.

PROJECT ADMINISTRATION: All questions relative to this project prior to the opening of bids shall be directed to the City Engineer ecasperson@mnogden.org. It shall be understood, however, that no specification interpretations will be made by telephone, nor will any "or equal" products be considered for approval prior to award of contract.

OWNER'S RIGHTS RESERVED: The Owner reserves the right to reject any or all bids, to waive an informality in a bid, and to make awards in the interest of the Owner.

AWARD OF CONTRACT: The contract will either be awarded or all proposals rejected within thirty (30) calendar days of the opening. The completion date will be mutually extended if award is delayed more than thirty (30) days. Unless all proposals are rejected the contract will be awarded using the **"Choosing by Advantages Decision Making System"**, In addition to the bid amount, each bid will be submitted with documentation to support the following factors:(1) Number of years of experience as a general contractor (2) List of projects of similar size and scope completed within the past 10-years (3) List of key personnel with their qualifications and experience assigned to this project. (4) List of sub-contractors. (5) List of projects of similar size and scope completed in North Ogden City within the last 10 years. (6) References. This documentation will be used in the choosing by advantages awarding process.

Dated this 14th day of November, 2022.

By: Susan Nance, City Recorder
NORTH OGDEN CITY CORPORATION

Published:

INSTRUCTION TO BIDDER

1. PREPARATION OF PROPOSAL

Proposals must be made on the prescribed forms. Each blank provided in the form titled "Proposal" shall be completed in ink (or typing). Where indicated, amounts are to be both words and figures with amounts extended and totaled. In case of discrepancy between written amounts and figures, the written amounts shall govern.

Any proposal must be deemed informal which contains omissions, erasures, alterations, additions, or irregularities of any kind.

The Bidder shall sign his name in the blank space provided. If the proposal is made by a partnership or corporation, the name and address of the partnership or corporation shall be shown. If the proposal is made by a partnership, it must be acknowledged by one of the partners; if made by a corporation, by one of the officers. The Bidder shall comply with all other specific requirements of the proposal form.

2. EXAMINATION OF SITE AND CONDITIONS

Before making a proposal, the Bidder shall examine the site of the work and determine for himself the existing conditions and the extent of which they will affect the proposal. Failure to do so will not relieve him from performing the work in strict accordance with the requirements of the Contract Documents. **In the event that the contractor desires to access portions of the project outside of the City right-of-way, he shall contact the City Director of Public Works to make prior arrangements before trespassing.**

No statement made by the Owner, or its officers, agents of employees pertaining to the site of the work or the conditions under which the work must be performed will be binding on the Owner.

3. SUBMISSION OF PROPOSAL

Each proposal shall be completely sealed in a package, marked with the name and address of the Bidder and the name of the project. The proposal must be delivered to the place named in the official advertisement and before the specified time.

4. MODIFICATION OF DELIVERED PROPOSAL

Change in a proposal already delivered will be permitted only if the request for the privilege of making such modification is made in writing, signed by the Bidder and the specific modification itself is stated prior to the scheduled closing time for the receipt of proposals. To be effective, every modification must be made in writing over the signature of the Bidder. No other form or procedure will be acceptable.

5. WITHDRAWAL OF PROPOSAL

A proposal may be withdrawn prior to scheduled closing time if the Bidder appears in person, or upon his telegraphic or written request. A telephoned request for withdrawal will not be recognized for this purpose. No Bidder will be permitted to withdraw his proposal after the scheduled closing time for filing bids, unless the contract has not been awarded before the expiration of the thirty day period immediately following the proposal submittal date. Bids received after the scheduled closing time will be returned to the Bidder unopened.

6. OPENING AND REJECTION OF PROPOSALS

All proposals received prior to the scheduled closing time and which are not withdrawn as above provided will be opened and read even though there may be irregularities or informalities therein, except that any proposal which is not signed will not be read and will be rejected without consideration.

The Owner reserves the right before or after opening, to reject any or all proposals or to waive any informality therein if it is believed that the best interests of the Owner will be served thereby.

7. AWARD OF CONTRACT

The contract will either be awarded or all proposals rejected within thirty (30) calendar days of the opening. Unless all proposals are rejected the contract will be awarded using the **"Choosing by Advantages Decision Making System"**, In addition to the bid amount, each bid will be submitted with documentation to support the following factors:(1) Number of years experience as a general contractor (2) List of projects of similar size and scope completed within the past 10-years (3) List of key personnel with their qualifications and experience assigned to this project. (4) List of sub-contractors. (5) List of projects of similar size and scope completed in North Ogden City within the last 10 years. (6) References. This documentation will be used in the choosing by advantages awarding process.

8. INTERPRETATION OF DOCUMENTS

If any person contemplating submitting a proposal is in doubt as to the true meaning of any part of the Contract Documents, or finds discrepancies in or omissions from the drawings or specifications, he may submit to the Engineer a written request for an interpretation or correction thereof and to be given consideration, shall be received at least five (5) days prior to date fixed for opening proposals. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the documents will be made only by addendum duly issued, and a copy of the addendum will be mailed to each person receiving a set of the Contract Documents. Neither the Owner nor the Engineer will be responsible for any other explanation or interpretation of the Contract Documents.

9. ADDENDA

Any addenda issued during the time of bidding will be in the form of written addenda to the specifications and will be emailed or faxed to each person who has previously received a set of Contract Documents. All addenda so issued shall become a part of the Contract Documents.

10. EMPLOYEE STATUS VERIFICATION

Utah Code Annotated Section 63G-12-302(3) states: "Beginning July 1, 2009, a public employer may not enter into a contract for the physical performance of services within the state with a contractor unless the contractor registers and participates in the Status Verification System to verify the work eligibility status of the contractor's new employees that are employed in the State." All bidders are required to conform with this law and should not submit a bid unless they currently comply with its provisions.

CONSTRUCTION PROPOSAL

2022-2023 SIDEWALK REPLACEMENT PROJECTS

For

NORTH OGDEN CITY CORPORATION

Receipt of Bids: December 12,2022, 2:00 p.m.
NORTH OGDEN CITY CORPORATION
505 East 2600 North
North Ogden, Utah 84414

OWNER: North Ogden City Corporation
505 East 2600 North
North Ogden, UT 84414

Gentlemen:

Complying with your request for bids and all documents related thereto, the undersigned hereby proposes to furnish all labor, materials, and equipment and to perform all work for the **2022-2023 SIDEWALK REPLACEMENT PROJECTS** as required by and in strict accordance with NORTH OGDEN City Standards and Specifications and for the prices shown on the bidding schedule.

We propose to complete the Project on or before **June 30, 2023**.

It is understood and agreed that the Contractor shall pay the Owner, as liquidated damages, the sum of $1,000.00 for each and every day that the work remains uncompleted after the elapse of the contract time, as provided.

Upon written notice, within 10 days after the date of opening of the proposals, or at any time thereafter before this proposal is withdrawn, the undersigned agrees that he, or they who is selected to perform the work shall promptly execute the Contract, secure liability insurance including worker's compensation insurance and furnish a satisfactory and faithful performance bond in the amount of 100% of the contract price and a payment bond in the amount of 100% of the contract price.

The Contractor shall warrant and guarantee that the material and workmanship of the improvements provided for hereunder, and every part thereof, remain in good condition for a period of one (1) year after the date of completion and acceptance by the Owner, which date shall be the date of the approval for the final estimate of the work as given by the Engineer, and the contractor agrees to make all repairs to, and maintain the improvements and every part thereof, in good condition during that time, at no cost to the Owner.

Enclosed is _____ as required in the sum of $_____.
Bid Bond or Cashier's Check

Addenda Nos._____ have been received

Proposed Sub-contractors:

Name:	Type of Work:
_____	_____
_____	_____

Choosing By Advantages

The “Choosing By Advantages System of Decision Making” (CBA) is the process adopted by North Ogden City to aid in awarding contracts. CBA is based on the fundamental rule of decision making that “Decisions must be based on the importance of advantages.” An advantage is defined as a positive difference between two alternatives. The advantages of a proposal are compared to the advantages found in other proposals to determine the preferred option. CBA weighs the advantages of the preferred option to the additional cost when awarding contracts. Consequently, the CBA analysis may result in awarding the project to a contractor other than the low bidder.

The factors that will be used in this advertisement for bid are listed below. For each factor, the City will evaluate the advantage found in each proposal. Some factors may be more important than others and will carry more weight in the decision making process.

The following table lists each factor. Bidders will supply the information requested in each factor, and the City will determine the respective advantages as noted above.

NORTH OGDEN CITY:

2022-2023 SIDEWALK REPLACEMENT PROJECTS

CONTRACTOR:

_____

_____

The contractor will be selected by a committee appointed by the City using the “Choosing by Advantages” Decision Making Process. The Contractor must provide information for each of the following factors that will be used in the decision making process.

Factor	Description
(1)	Number of years of experience as a general contractor:
(2)	List of projects of similar size and scope completed within the past 10-years:
(3)	List of key personnel with their qualifications and experience assigned to this project:

Factor	Description
(4) List of sub-contractors:	
(5) List of projects of completed in North Ogden City within the last 10 years*:	
(6) References:	

***** Previous work experience with North Ogden City is not a requirement. Projects listed in this section will help the City determine if past work with North Ogden City has been deemed successful. Projects will be considered successful if they have been completed in a timely manner, in a spirit of cooperation, with minimal contractor generated change orders, with professionalism, having achieved project objectives and other positive outcomes as noted by the review committee.

B I D D I N G S C H E D U L E

NORTH OGDEN CITY CORPORATION
2022-2023 SIDEWALK REPLACEMENT PROJECTS

Item	Description	Quantity	Unit	Price	Amount
	Work shall be performed at locations shown on the table following the Bidding Schedule. No priorities have been set at this time. They may be set at a future date and some locations may be deleted, depending on budget.				
1	Remove and replace 4" thick concrete sidewalk with 4" thick road base under.	960	s.f.	_____	_____
	Total Bid (item 1)				$ _____
2	Remove and replace 30" concrete curb & gutter with 4" thick road base under.	110	l.f.	_____	_____
	Total Bid (item 2)				$ _____

PROJECT LOCATIONS TABLE

Address/Location	Sections	Total sq ft
4" THICK SIDEWALK		
861 E 3450 N	4	64
3171 N Mt Lomond Dr	11	176
407 E 3700 N	7	112
3139 N 800 E	2	32
3739 N 575 E	6	96
1497 N Mtn Rd	20	320
2107 N 400 E	6	96
841 E 3400 N	4	64
Total Square Feet of sidewalk		**960**

Address/Location	Sections	Total sq ft
30" CURB & GUTTER		**Lineal ft.**
3381 N 425 E		30
1252 E 2250 N		20
818 E 3575 N		10
3668 N 200 E		20
778 E 2550 N		30
Total Lineal Feet of curb & gutter		**110**

It is understood that the quantities stated are approximate only and are for the purpose of comparing bids and fixing the amount of bonds, and the payments will only be made on the basis of the above unit prices in the actual quantities, as determined by the Owner's Engineer in the completed work.

The undersigned have checked carefully all of the above figures and understand that the Owner will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

In submitting this bid, it is understood that the right is reserved by the Owner to reject any and all bids and award any and all schedules together or separately in the interest of the Owner.

It is agreed that the bid may not be withdrawn over a period of thirty (30) days from the opening thereof.

It is understood that the Owner cannot enter into a contract for the physical performance of services within the state with a contractor unless the contractor registers and participates in the Status Verification System to verify the work eligibility status of the contractor's new employees that are employed in the state. Accordingly, by signing below, the Contractor certifies that he or she is a participant in the Status Verification System.

Similarly, each contractor or subcontractor working under the Contractor shall certify to the main contractor by affidavit that the contractor or subcontractor has verified through the Status Verification System the employment status of each new employee of the respective contractor or subcontractor.

Respectfully submitted:

_____ _____
Contractor Contractor's License #

By:_____ _____
Title

_____ _____ _____ _____
Business Address City State Zip Code

BID BOND

KNOW ALL MEN BY THESE PRESENTS,

That _____as Principal,

and _____ as Surety,

are held and firmly bound by **NORTH OGDEN CITY CORPORATION**

hereinafter called "Owner", in the sum of _____
(not less than 5% of the total amount)

dollars, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has submitted a bid to said Owner to perform all work required under the

bidding schedule(s) _____ of the

Owner's Contract Documents entitled **2022-2023 SIDEWALK REPLACEMENT PROJECT**

NOW THEREFORE, if said Principal is awarded a contract by said Owner and, within the time and in the manner required under the heading "Instruction to Bidders", enters into a written contract on the form of agreement bound with said Contract Documents, furnishes the required certificates of insurance, and furnishes the required Performance Bond and Payment Bond within 10 calendar days after receipt of contract from said Owner, then this obligation shall be null and void; otherwise, it shall remain in full force and effect. In the event suit is brought upon this bond by said Owner and judgment is recovered, said Surety shall pay all costs incurred by said Owner in such suit, including reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this _____ day of _____, _____ .

_____(SEAL) _____ (SEAL)
Principal Surety

By:_____ By: _____
Signature Signature

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

Private Employer Affidavit of Compliance Pursuant To Utah Code 63G-12-302

By executing this affidavit, the undersigned private employer verifies its compliance with Utah Code 63G-12-302, stating affirmatively that the individual, firm or corporation has registered with and utilizes the federal work authorization program commonly known as E-Verify, or other authorized Status Verification System, in accordance with the applicable provisions and deadlines established in Utah Code. Furthermore, the undersigned private employer hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____
Federal Tax ID #

_____
Name of Private Employer on File with E-Verify

I hereby declare under penalty of perjury that the foregoing is true and correct. I also acknowledge that the company's non-compliance with Utah Code 63G-12-302.

_____ _____
Signature of Authorized Officer or Agent Date

_____
Printed Name and Title of Authorized Officer or Agent

STATE OF UTAH)
:SS
County of _____)

On _____, _____, 2022, personally appeared before me

_____ the signer of the within instrument, who duly acknowledged to me that she executed the same.

_____
Notary Public

CONTRACT AGREEMENT

This contract made and entered into the _____ day of _____ in the year **2022** between **North Ogden City**, hereinafter called the OWNER and _____, hereinafter called the CONTRACTOR.

Part I--Statement of Work

CONTRACTOR shall furnish all materials, equipment and personnel necessary to construct the **2022-2023 SIDEWALK REPLACEMENT PROJECTS** ("WORK"). The WORK shall be accomplished in accordance with the Plans, Technical Specifications, General Conditions and Special Conditions ("SPECIFICATIONS") prepared by The City Engineer ("ENGINEER").

SPECIFICATIONS are incorporated herein by reference.

Part II--Period of Performance

The CONTRACTOR shall complete all work on or before **June 30, 2023.**

Contractor and Owner recognize that time is of the essence and that Owner will suffer financial loss if the Work is not completed within the time specified above, plus any approved extensions as outlined in the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner **$1,000.00** per day for each day that expires after the completion time specified in this agreement until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner **$1,000.00** for each day that expires after the contract completion time for completion and readiness for final payment until the Work is completed and ready for final payment.

Part III- Consideration

For and in consideration of the performance of this contract, the CONTRACTOR shall be paid: $_____ **(Unit price contract-- Contract Price to be adjusted based on actual quantity of the work)**

Part IV--Special Provisions

A. Wage Rate--N/A.

B. Terms and Conditions

(1) The General Conditions of the Contract, EJCDC Document C-700 appended hereto are hereby made part of this contract.

(2) CONTRACTOR shall deliver to the OWNER required Bonds and Certificates of Insurance naming the OWNER, NORTH OGDEN CITY**, and it's elected and appointed officials, employees, volunteers, agents, and others working on behalf of the OWNER as additional insured**.

(3) Indemnification: CONTRACTOR at its own expense, agrees to protect, indemnify, pay on behalf of, defend and hold harmless the OWNER, it's elected and appointed officials, employees and volunteers and their agents from all claims, demands, judgments, expenses, and all other damages of every kind and nature, made, rendered, or incurred by or in behalf of any person or persons whomsoever, including the parties hereto and their employees, which may arise out of any act or failure to act, work or other activity related in any way to this project under this contract, by the CONTRACTOR, contractor's agents, employees, subcontractors, or suppliers in the performance and execution of this contract as outlined in Section 6.2 of the General Conditions.

(4) Utah Code Annotated Section 63G-12-302(3) states: "Beginning July 1, 2009, a public employer may not enter into a contract for the physical performance of services within the state with a contractor unless the contractor registers and participates in the Status Verification System to verify the work eligibility status of the contractor's new employees that are employed in the State."

Owner:
North Ogden City Corporation.
505 East 2600 North,
North Ogden, Utah 84414

_____
Signature

_____
Title

_____
Attest

Contractor:

_____
Signature

_____
Title

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS,

That _____ as Contractor,

and _____ as Surety,

are held and firmly bound unto **NORTH OGDEN CITY CORPORATION**

hereinafter called "Owner", in the sum of _____
(not less than 100% of the total amount)

dollars, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has been awarded and is about to enter into the annexed Contract with said Owner to perform all work required under the bidding schedule(s) of the Owners Contract Documents entitled:

2022-2023 SIDEWALK REPLACEMENT PROJECTS

_____

NOW THEREFORE, if said Contractor, or subcontractor, fails to pay for all materials, equipment, or other supplied, or for rental of same, used in connection with the performance of work contracted to be done, or for amounts due under applicable State law for any work or labor thereon, said surety will pay for the same in an amount not exceeding the sum specified above, and, in the event suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond shall inure to the benefit of any persons, companies, or corporations entitled to file claims under applicable State law.

PROVIDED, that any alterations in the work to be done or the materials furnished, or changes in the time of completion, which may be made pursuant to the terms of said Contract, shall not in any way release said Contractor or said Surety thereunder, nor shall any extensions of time granted under the provisions of said Contract release either said Contractor or said Surety, and notice of such alterations or extensions of the Contract is hereby waived by said Surety.

SIGNED AND SEALED, this _____ day of _____, 20_____.

_____ (SEAL) _____ (SEAL)
Contractor Surety

By:_____ By:_____
Signature Signature

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS,

That _____ as Contractor,
and _____ as Surety,

are held and firmly bound unto **NORTH OGDEN CITY Corporation**

hereinafter called "Owner", in the sum of _____
(not less than 100% of the total amount)

dollars, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has been awarded and is about to enter into the annexed Contract with said Owner to perform all work required under the bidding schedule(s) of the Owners Contract Documents entitled:

2022-2023 SIDEWALK REPLACEMENT PROJECTS

NOW THEREFORE, if said Contractor shall perform all the requirements of said Contract required to perform on his part, at the times and in the manner specified therein, then the obligation shall be null and void; otherwise, it shall remain in full force and effect.

PROVIDED, that any alterations in the work to be done or the materials furnished, or changes in the time of completion, which may be made pursuant to the terms of said Contract, shall not in any way release said Contractor or said Surety thereunder, nor shall any extensions of time granted under the provisions of said Contract release either said Contractor or said Surety, and notice of such alterations or extensions of the Contract is hereby waived by said Surety.

SIGNED AND SEALED, this _____ day of _____, 20_____.

_____ (SEAL) _____ (SEAL)
Contractor Surety

By:_____ By:_____
Signature Signature

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

SECTION 3.1

SPECIAL PROJECT CONDITIONS

3.1.01 **PROJECT LOCATION**: The project is in various locations throughout the City.

3.1.02 **PROJECT DESCRIPTION**: The work consists of the removal and replacement of approximately 960 square feet of 4" thick sidewalk and 110 l.f. of 30" curb & gutter.

3.1.03 **CONTRACT TIME**: The contractor shall complete the construction of the work covered under the contract documents on or before **June 30, 2023**. It is agreed that time is the essence of this contract, and if construction is not complete by the end of the contract time, liquidated damages in the amount of $1000.00 per calendar day shall be assessed on the Project for each additional calendar day until construction is certified by the Engineer as being substantially complete.

3.1.04 **SOIL CONDITIONS**: No test holes or pits have been dug in connection with this project. The Contractor should examine the site to make his own judgment concerning soil conditions.

3.1.05 **EXISTING UTILITIES**: Engineer has attempted to show the location of all known underground utilities, but the accuracy or completeness of the presentation is not guaranteed. It shall be the responsibility of the Contractor to contact utility companies to determine the exact location, type and shall be responsible for the protection of these utilities. In the event these utilities or service lines are damaged, they shall be repaired at no additional expense to the Owner.

3.1.06 **WORK ON STATE, COUNTY AND CITY ROADS**: The Owner will obtain all required licenses for construction on State, County and City Roads, but securing of digging permits and posting of required bonds will be the responsibility, and at the expense of the Contractor.

All survey monuments and markers shall be protected and preserved by the Contractor. In the event the construction requires the removal and re-establishing of survey monuments or markers, the Contractor shall so inform the Engineer.

Re-staking by the Engineer as a result of the Contractor's carelessness or failure to protect survey marks and stakes shall be accomplished at the expense of the Contractor. Application for construction stakes must be made by the Contractor at least 72 Hours before the services of a survey party will be required to accomplish the staking.

3.1.07 **WATER FOR CONSTRUCTION**: Water required for consolidation of trench backfilling, testing, flushing, and other construction purposes shall be provided by the Contractor.

3.1.08 **PUBLIC CONVENIENCE AND SAFETY**: During the progress of the work, adequate provisions shall be made by the Contractor to accommodate the normal traffic over the road or street being used as to cause a minimum inconvenience to the public. Means of ingress and egress for occupants of property adjacent to the work, with convenient access to driveways, houses and buildings shall be provided when applicable.

The Contractor shall provide and maintain barriers, guards, lights, and temporary bridges and post flagmen and watchmen when and where necessary in order to effectively guard the public from danger involved with the work being done.

3.1.09 **CLEAN-UP**: Throughout all phases of construction, the Contractor shall keep the construction areas in a clean condition free from rubbish and debris. All materials and equipment required in

connection with the construction of any portion of the work shall be removed from the site as soon as the use of said materials and equipment at that location in no longer necessary, and the area shall be thoroughly cleaned by sweeping with power and/or hand brooms or by other means which will produce results equal to or better than conditions prior to construction.

Care shall be taken to prevent spillage on streets over which hauling is done and any such spillage or debris deposited on streets due to the Contractor's operations shall be immediately removed and the streets cleaned.

Excess excavated material resulting from excavation shall be removed from the site immediately, except that sufficient material may remain for use as backfill material if such use is permitted by the provisions of the Specifications. Likewise, forms and form lumber shall be removed from the site immediately following the striping operation.

Upon completion of the work and prior to final inspection, the entire site of the operation shall be cleared of equipment, unused materials, and rubbish so as to present a clean and neat appearance satisfactory to the Engineer. All costs of "clean-up" shall be absorbed in the prices bid for the various bid items.

3.1.10 **UPDES STORM WATER PERMIT**: The contractor shall submit a Notice of Intent (NOI) if the Project shall require a storm water general permit from the State of Utah for coverage under the Utah Pollution Discharge Elimination System (UPDES). The Contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) if required. The contractor shall be responsible to comply with the provisions of the plan and shall update the plan as necessary and comply with all current UPDES regulations. The Contractor shall submit a Notice of Intent to the State as the main operator to obtain a permit for coverage under the Utah Pollution Discharge Elimination System. The general contractor shall be required to amend the permit so as to be listed as a Co-Permittee with the City.

3.1.11 **SANITARY PROVISIONS**: The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as may be necessary to comply with all applicable laws, ordinances and regulations pertaining to public health and sanitation.

3.1.12 **DUST ABATEMENT**: During the performance of the work required by these Specifications or any operations appurtenant thereto, whether on the right-of-way provided by the City or elsewhere, the Contractor shall furnish all labor, equipment, materials, and means required, and shall carry out proper and efficient measures wherever and as often as necessary to reduce the dust nuisance and to prevent dust which is originated from the operations under these Specifications on City right-of-way or elsewhere. The cost of sprinkling or other methods of reducing formation of dust shall be included in the prices bid in the schedules for other items of work.

3.1.13 **PROTECTION OF EXISTING UTILITIES**: The Contractor shall take all reasonable precautions to protect all existing utilities at all times during construction under this contract.

3.1.14 **INSPECTION**: All construction work shall be subject to inspection by the Owner's Engineer or its representatives. Certain types of construction shall have continuous inspections while others may have only periodic inspection. The Contractor shall notify the Owner's Engineer or its representative of timetable when concrete pours are to be made, in advance of pour sufficient to allow inspections of forms, grades, etc.

On construction requiring continuous inspection, the Contractor shall be notified and no work shall be done without the inspector's approval.

An inspection shall be made by the Engineer after all construction work is completed. Any faulty or defective work shall be corrected by the persons responsible for the work within a period of thirty (30) days of the date of the Engineer's Inspection Report defining the faulty or defective work.

3.1.15 **SURVEY & TESTING**: The Owner shall pay for surveying of the Project one time to ensure proper location of infrastructure. The Contractor shall be responsible to maintain surveying stakes and locating devices. In the event that survey staking is damaged, moved, or destroyed, the Contractor shall pay for re-staking. Pressure testing of the infrastructure according the specifications set forth herein shall be required and included in the appropriate line item bid by the Contractor. The owner shall pay for compaction testing and any other testing deemed necessary that is not specifically required by the contract specifications.

3.1.16 **CONSTRUCTION THROUGH PRIVATE PROPERTY**: The Contractor shall confine all his operations to the area within the Public Right-of-way or construction easement which has been acquired by the City. In general, the easement or right-of-way area is intended to provide reasonable access and working area for efficient operation by the Contractor. If additional easement width and/or additional access routes are desired, the Contractor shall negotiate with and compensate the private owners for such use.

3.1.17 **MEASUREMENT, PAYMENT AND WORK QUANTITIES**: Measurement and payment for all work shall be defined in Section 3.2.

The right is reserved to increase or decrease or to entirely eliminate certain items from the work if found desirable or expedient, and the Contractor is cautioned against unbalancing of his bid by prorating this overhead and profit into one or two items when there are a number of items on the Proposal. The overhead, indirect charges and profit should be prorated on all items in the Proposal.

The Contractor will be allowed no claims for anticipated profits, loss of profits or for damages because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed Project.

3.1.18 **GUARANTEE**: The Contractor warrants and guarantees that the materials and workmanship of the improvements provided for hereunder, and every part thereof, remain in good condition for a period of one (1) year after the date of completion and conditional acceptance by the Owner, which date shall be the date of approval for the final estimate of the work as given by the Engineer, and agrees to make all repairs to, and maintain the improvements and every part thereof, in good condition during the time, with no cost to the Owner; and the bonds shall remain in full force until conditions of this contract are fulfilled.

SECTION 3.2

MEASUREMENT AND PAYMENT

3.2.01 **GENERAL:** Measurement and calculation of quantities for payment will be specified in this section. Unit price bid shall be full compensation for furnishing all labor, materials, tools and equipment, and doing all work shown on the Drawings or stipulated in the Specifications.

3.2.02 **REMOVE AND REPLACE 4" THICK CONCRETE FLATWORK** **(Bid item 1):** Measurement and payment for this item shall be on a per square foot basis as measured in the field following construction. All sections of sidewalk needing replacement will be marked by City personnel prior to commencement of work. Payment shall be full compensation to complete the item including mobilization, saw cut, removal of existing flatwork, loading, hauling and disposal of the concrete flatwork in a lawful manner, coordination with the home owner, excavation and root removal, installation of the concrete flat work, including all labor, materials, equipment, traffic control including pedestrian traffic, grade controls, preparation and compaction of subgrade, furnish and placing road base material under flatwork (4" thick UTBC as per City Standard), grading, forming, control joints and expansion joints as needed, finishing concrete, curing, form stripping, protection of concrete until it has properly cured, restoration or relocation of miscellaneous surface improvements damaged during construction (including sprinkler systems, mailboxes, signs, backfill, topsoil, sod repair, misc. landscaping improvements), and cleanup following construction.

3.2.03 **REMOVE & REPLACE 30" CONCRETE CURB AND GUTTER** **(Bid item 2):** Measurement and payment for this item shall be on a per lineal foot basis as measured along the top back of curb in the field following construction. Payment shall be at the unit price bid amount and be full compensation to complete the work associated with removal of and construction of curb and gutter in the locations shown on the drawings. The work includes but is not limited to the following: mobilization, all labor, materials, traffic control including pedestrian traffic, equipment, saw cut, removal of existing curb & gutter, loading, hauling and disposal of the curb & gutter in a lawful manner, coordination with the home owner, excavation and root removal, installation of the 30" concrete curb & gutter, grade controls, furnish and placing 4" thick road base material under the new curb & gutter (4" thick UTBC as per City Standard), forming, furnishing concrete, constructing drop back for driveway approaches and ADA ramps if needed, expansion joints, contraction joints, construction joints, finishing and curing concrete, protection of concrete until it has properly cured, restoration or relocation of miscellaneous surface improvements damaged during construction (including sprinkler systems, mailboxes, signs, backfill, topsoil, sod repair, misc. landscaping improvements), and cleanup following construction. Engineer or owners representative must be allowed to inspect curb string line or forms before casting of curb and gutter.

3.2.05. **QUANTITY LIMITS:** The Owner reserves the right to adjust and direct the actual quantities of work performed on the project in order to maintain budget control. All unit price bid amounts shall not be subject to negotiated modifications unless the actual quantities constructed or directed to be constructed, amount to 50% above or below the quantity shown on the original bidding schedule.

PART 4 – TECHNICAL SPECIFICATIONS

SECTION 4.3

EARTHWORK

4.3.1 GENERAL: This section defines the requirements for excavation and backfill for structures, construction requirements for embankments and fills, and subgrade preparation for pavements and other surface improvements.

4.3.2 EXCAVATION FOR STRUCTURES: All structures shall be founded on undisturbed original subsoil. All unauthorized excavation below the specified structure subgrade shall be replaced with concrete monolithic with that of the slab above or with coarse gravel compacted to 95% of maximum dry density as measured by AASHTO T-180 in lifts not to exceed 10".

Subgrade soil for all concrete structures, regardless of type or location, shall be firm, dense, thoroughly compacted and consolidated; shall be free from mud and shall be compacted to 95% of AASHTO T-180. Coarse gravel or crushed stone may be used for subsoils reinforcement if satisfactory results can be obtained thereby. Such material shall be applied in thin layers not to exceed 4", each layer being embedded in the subsoil by thorough tamping. All excess soil shall be removed to compensate for the displacement of the gravel or crushed stone, and the finished elevation of any subsoil reinforced in this manner shall not be above the subgrade elevation.

4.3.3 BACKFILL AROUND STRUCTURES: Backfill around structures shall be placed to the lines shown on the approved drawings, or as directed. After completion of foundation footings and walls and other construction below the elevation of the final grades, and prior to backfilling, all forms shall be removed and the excavation shall be cleaned of all trash and debris. Material for backfilling shall consist of excavated material or borrow of sand, gravel, or other suitable material, and shall be placed in layers not exceeding ten (10) inches in uncompacted thickness. Each layer shall be compacted by hand or machine tampers or by other suitable equipment to a density equal to 95% of maximum dry density as measured by AASHTO T-180.

4.3.4 CONSTRUCTION OF EMBANKMENTS AND FILLS: Unsuitable materials that occur in the foundations for embankments and fills shall be removed by clearing, stripping, and/or grubbing. After stripping, the foundation shall be scarified to a depth of not less than six inches, and the loosened material shall be moistened and compacted as hereinafter specified for each layer. All materials in embankments and fills shall be placed, moistened, and compacted as provided in the following paragraphs.

When the embankment or fill exceeds the amount of excavation, sufficient additional material shall be obtained from borrow pits provided by the Contractor. All material proposed to be imported shall be subject to the review and approval of the City Engineer or his representative prior to start of hauling operations.

The materials used for embankment and fill construction shall be free from sod, grass, trash, rocks larger than four inches in diameter, and all other material unsuitable for construction of compacted fills.

Grading of completed embankments and fills shall bring the surfaces to a smooth, uniform condition with final grades being within 0.1 foot of the design grade. In no case shall embankment slopes be steeper than 3:1.

4.3.5 COMPACTING EARTH MATERIALS: The material shall be deposited in horizontal layers having a thickness of not more than 10 inches after being compacted as hereinafter specified; provided that, when mechanical equipment is used for placing and compacting the material on a sloping foundation, the layers may be placed parallel to the foundations. The distribution of materials

shall be such that the compacted material will be homogeneous and free from lenses, pockets, or other imperfections.

During compaction operations the material shall have the optimum moisture content required for the purpose of compaction, and the moisture content shall be uniform throughout the layers, insofar as practicable. Moistening of the material shall be performed at the site of excavation, but such moistening shall be supplemented as required by sprinkling at the site of construction. If the moisture content is more than optimum for compaction, the compaction operations shall be delayed until such time as the material has dried to the optimum moisture content. When the material has been conditioned as hereinbefore specified, the backfill or embankment shall be compacted as follows:

A. Under Roadways and extending one foot beyond the proposed curb line the fill or embankment material shall be compacted to a density equal to not less than 95% of maximum dry density as measured by AASHTO T-180.

B. Under Sidewalk and Drive Approaches the fill or embankment material (to at least one foot each side of the edge of the slab) shall be compacted to a density equal to not less than 95% of maximum dry density as measured by AASHTO T-180.

C. Other Fills and Embankments not listed above shall be compacted to a density equal to not less than 85% of maximum dry density as measured by AASHTO T-180.

4.3.6 ROAD SUBGRADE PREPARATION: In both cut and fill areas the paving subgrade shall be scarified to a depth of eight inches and compacted to the equivalent of 95% of maximum dry density as measured by AASHTO T-180. No rocks larger than four inches in diameter, organic material, soft clay, spongy material, or other deleterious material will be permitted in this scarified subgrade layer. Rough subgrades shall be shaped and graded to within a tolerance of 0.10 foot of design grade, and drainage shall be maintained at all times.

During the rolling operation moisture content of the subgrade layer shall be maintained at not less than 97% or more than 105% of optimum moisture content. Rolling shall be continued until the entire roadbed is compacted to the specified density to a minimum depth of eight inches.

SECTION 4.5

PORTLAND CEMENT CONCRETE

5.1 SCOPE: This section of the specifications defines materials to be used in all portland cement concrete work and requirements for mixing, placing, finishing, and curing.

5.2 MATERIALS: Materials used in portland cement concrete and reinforcing of portland cement concrete shall meet the following requirements.

A. Cement: Portland cement shall be Type II or as approved by the City Engineer and shall comply with the Standard Specification for Portland Cement, ASTM C-150.

B. Aggregates: Concrete aggregates shall conform to Tentative Specifications for Concrete Aggregates, ASTM C-33.

C. Water: Water used in mixing concrete shall be clean and free from oil, acid, salt, injurious amounts of alkali, organic matter or other deleterious substances.

D. Entraining Agent: An air-entraining agent shall be used in all concrete exposed to the weather. The agent shall conform to ASTM Designation C-175 and C-260.

E. Admixtures: No admixture (except calcium chloride) will be permitted to be used in portland cement concrete unless such use is specifically authorized by the City Engineer. Calcium chloride shall conform to ASTM Standard Specification D-98.

F. Reinforced Steel: All bar material used for reinforcement of concrete shall be grade 60 steel conforming to the requirements of ASTM Designation A-615 and shall be deformed in accordance with ASTM Designation A-305.

G. Welded Wire Fabric: Welded wire fabric for concrete reinforcement shall conform to the requirements of ASTM A-185.

5.3 CONCRETE MIX: For the purpose of practical identification, concrete has been divided into three classes: Class A, B, and C. Basic requirements and use for each class are as defined below:

CLASS	Minimum Cement (sacks/c.y.)	Minimum 28-day Compressive Strength (p.s.i.)	Primary Use
"A"	6-1/2	4,000	Reinforced Structural Con-crete
"B"	6	3,500	Sidewalks, curb, gutters, cross gutters, pavements and unreinforced footings and foundations
"C"	5	2,500	Thrust Blocks, anchors, mass concrete

All concrete shall also comply with the following requirements.

A. Aggregates: The maximum size of the aggregate shall be not larger than one-fifth of the narrowest dimension between forms within which the concrete is to be cast, nor larger than three-fourths of the minimum clear spacing between reinforcing bars or between reinforcing bars and forms. For unreinforced concrete slabs, the maximum size of aggregates shall not be larger than one-fourth the slab thickness.

B. Water: Sufficient water shall be added to the mix to produce concrete with the minimum practicable slump. The slump of mechanically vibrated concrete shall not exceed four inches. No concrete shall be placed with a slump in excess of five inches. The maximum permissible water-cement ratio (including free moisture on aggregates) shall be 5 and 5 3/4 gallons per bag of cement respectively for Class A and B air entrained concrete.

C. Air-Entraining: Air content for air-entrained concrete shall comply with the following:

Course Aggregate

Size (In.)	Air Content %
1 ½ to 2 ½	5 +/- 1
3/4 or 1	6 +/- 1
3/8 or ½	7 +/- 1

The air-entraining agent shall be added as liquid to the mixing water by means of mechanical equipment capable of accurate measurement and control.

D. Calcium Chloride: Calcium chloride may be added as an accelerator with prior approval of the City Engineer during cold weather, with maximum amount being two pounds per sack of cement.

5.4 FORMS: Forms shall be substantially built and adequately braced so as to withstand the liquid weight of concrete. All linings, studding, walling and bracing shall be such as to prevent bulging, spreading, or loss of true alignment while pouring and displacement of concrete while setting.

Metal forms shall be used for curb and gutter work unless otherwise specified by the City Engineer. All edge forms for sidewalk pavements, curbs, and gutters shall be of sufficient rigidity and adequately braced to accurately maintain line and grade. Prior to concrete placement, all forms shall be lightly coated with oil to prevent concrete adhesion to form materials.

Forms for curved sections shall be so constructed and placed that the finish surface of walls and edge of sidewalks, curbs and gutters will not deviate appreciable from the arc of the curve.

Exposed vertical and horizontal edges of the concrete in structures shall be chamfered by the placing of moldings in the forms at those locations shown on the Drawings.

5.5 JOINTS: Joints shall be provided for sidewalk and curb and gutter as follows:

A. Sidewalks:

Shall have scribed joints at intervals equal to the width of the sidewalk but not to exceed 10 feet or as directed. Joints shall be approximately 3/16" wide and be approximately 1/4 of the total slab thickness. Expansion joint in sidewalk shall be at intervals not to exceed 44 feet and shall extend the full depth of the concrete.

B. Curb and Gutter:

Shall be cut into lengths of 10 feet by the use of 1/8 inch steel division plates of the exact cross section of the curb and gutter when constructed by hand methods. Curb and gutter constructed with a lay down machine shall be scribed with joints which shall be approximately 1/16" wide and be approximately 1/4 of the total curb thickness.

5.6 REINFORCEMENT AND EMBEDDED ITEMS: Reinforcing steel shall be clean and free from rust, scale, paint, grease, or other foreign matter which might impair the bond. It shall be accurately bent and shall be tied to prevent displacement when concrete is poured. Reinforcing steel shall be held in place by only metal or concrete ties, braces and supports. No steel shall extend from or be visible on any finished surface and shall have a minimum of 1 ½ inch concrete cover.

The Contractor shall use concrete chairs for holding the steel away from the subgrade, and spreader or other type bars for securing the steel in place. The spreader bars shall be not less than 3/8 inch in diameter.

5.7 PREPARATIONS: Before batching and placing concrete, all equipment for mixing and transporting the concrete shall be cleaned, all debris and ice shall be removed from the places to be occupied by the concrete, forms shall be thoroughly wetted (except in freezing weather) or oiled, and masonry filler units that will be in contact with concrete shall be well drenched (except in freezing weather), and the reinforcements shall be well drenched (except in freezing weather), and the reinforcements shall be thoroughly cleaned of ice or other coatings. Water shall be removed from spaces to receive concrete.

When placing concrete on earth surfaces the surfaces shall be free from frost, ice, mud, and water. When the subgrade surface is dry soil or pervious material, it shall be sprayed with water immediately before placing of concrete or shall be covered with waterproof sheathing paper or a plastic membrane. No concrete shall be placed until the surfaces have been inspected and approved by the City Engineer or City Inspector.

5.8 CONCRETE MIXING: All concrete shall be ready-mixed and delivered in accordance with ASTM C-94. The concrete shall be mixed until there is a uniform distribution of the materials. Sufficient water shall be used in mixing concrete to produce a mixture which will flatten and quake when deposited in place, but not enough to cause it to flow. Sufficient water shall be used in concrete in which reinforcement is to be embedded, to produce a mixture which will flow sluggishly when worked and which, at the same time, can be conveyed from the mixer to the forms without separation of the coarse aggregate from the mortar. In no case shall the quantity of water used be sufficient to cause the collection of a surplus in the forms or exceed the maximum allowable slump as specified in 5.3 (b).

5.9 DEPOSITING: Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to re-handling or flowing. The concrete placing shall be carried on at such a rate that the concrete is at all times plastic and flows readily into the corners of forms and reinforcing bars. No concrete that has partially hardened or been contaminated by foreign material shall be deposited in the work, nor shall re-tempered concrete be used. No concrete shall be dropped more than 3 feet. Concrete delivered to the job site having a temperature which exceeds 90° F shall not be placed. Concrete cooling methods during hot weather will be approved by the City Engineer.

All concrete in structures shall be vibrator compacted during the operation of placing and shall be thoroughly worked around reinforcement and embedded fixtures and into the corners of the forms.

5.10 PLACING CONCRETE IN COLD WEATHER: No concrete shall be poured where the air

temperature is lower than 40° F, at a location where the concrete cannot be covered or protected from the surrounding air. When concrete is poured below a temperature of 35° F the ingredients of the concrete shall be heated so that the temperature of the mixture shall not be less than 50° or more than 100° F. Before mixing, the heated aggregates shall not exceed 125° F and the temperature of the heated water shall not exceed 175° F. Cement shall not be added while the temperature of the mixed aggregates and water is greater than 100°F. When there is likelihood of freezing during the curing period, the concrete shall be protected by means of an insulating covering and/or heating to prevent freezing of the concrete for a period of not less than 7 days after placing. Concrete shall not be placed on frozen soil.

Equipment for protecting concrete from freezing shall be available at the job site prior to placing concrete. Particular care shall be exercised to protect edges and exposed corners from freezing. In the event heating is employed, care shall be taken to insure that no part of the concrete becomes dried out or is heated to temperatures above 90° F. The housing, covering, or other protection used shall remain in place and intact at least 24 hours after the artificial heating is discontinued. Combustion heaters shall not be used during the first 24 hours unless precautions are taken to prevent exposure of the concrete to exhaust gases which contain carbon dioxide.

5.11 FINISHING: All concrete finish work shall be carefully performed and shall produce a top quality visual appearance as is common to the industry. After the concrete for slabs has been brought to the established grade and screened it shall be worked with a magnesium float and then given a light broom finish. In no case shall dry cement or a mixture of dry cement and sand be sprinkled on the surface to absorb moisture or hasten hardening. Surface edges of all slabs shall be rounded to a radius of ½ inch.

After concrete has been poured in curb and gutter forms it shall be puddled and spaded so as to insure a thorough mixture, eliminate air pockets, and create uniform and smooth sides. Before the concrete has thoroughly set, and while the concrete is still green, the forms shall be removed and the front and top sides shall be finished with a flat or steel trowel to make a uniform finished surface. Wherever corners are to be rounded, special steel trowels shall be used while the concrete is workable and the corners constructed to the dimensions specified.

The top and face of the curb and also the top of the apron on combined curb and gutter must be finished true to line and grade and without any irregularities of surface noticeable to the eye. The gutter shall not hold water to a depth of more than one fourth (1/4) of an inch, nor shall any portion of the surface or face of the curb or gutter depart more than one-fourth (1/4) of an inch from a straight edge ten (10) feet in length, placed on the curb parallel to the center line of the street nor shall any part of the exposed surface present a wavy appearance.

5.12 CURING AND PROTECTION: As soon as the concrete has hardened sufficiently to prevent damage, the finished surface shall be protected for curing one of the following ways:

A. Ponding of water on the surface or continuous sprinkling.

B. Application of absorptive mats such as 3-inch of cured hay, clean straw or fabric kept continuously wet.

C. Application of two inches of moist earth or sand uniformly distributed on the surface and kept saturated by spraying with water.

D. Application of light colored waterproof plastic materials, conforming to "Specifications for Waterproof Sheet Materials for Curing Concrete" ASTM C-171, placed and maintained in contact with the surface of the concrete.

E. Application of a curing compound, conforming to "Specifications for Liquid Membrane - Forming Compounds for Curing Concrete" ASTM C-309. The compound shall be light in color and shall be applied in accordance with the manufactures recommendations immediately after any water sheen, which may develop after finishing has disappeared from the concrete surface.

The freshly finished surface shall be protected from hot sun and drying winds until it can be sprinkled or covered as above specified. The concrete surface must not be damaged or pitted by rain. The contractor shall provide and use, when necessary, sufficient tarpaulins to completely cover all sections that have been placed within the preceding twelve (12) hours.

The Contractor shall erect and maintain suitable barriers to protect the finished surface. Any section damaged from traffic or other causes occurring prior to its official acceptance, shall be repaired or replaced by the Contractor at his own expense in a manner satisfactory to the City Engineer.

Defective concrete conditions or surfaces shall be removed, replaced or repaired as directed to meet the approval of the City Engineer.

5.13 CONCRETE TESTING: In the event that the concrete placed or delivered to the job site appears to have questionable quality, the City Engineer may order the taking of concrete test cylinders to check required compressive strengths. In place concrete may be cored for testing. Cost of all required laboratory testing shall be the responsibility of the Subdivider/Developer, Contractor or ready-mix supplier. All concrete delivered to the job site shall be accompanied by a ticket specifying bag mix, air content, etc., said tickets shall be given to the City Inspector who may field check slump and air entrainment compliance.

SECTION 4.15

RESTORATION OF SURFACE IMPROVEMENTS

4.15.1 GENERAL: The Contractor shall be responsible for the protection and the restoration or replacement of any improvements existing on public or private property at the start of work or placed there during the progress of the work. All restoration of improvements shall comply with the requirements of Section 2 - "Permit Requirements for Work in the Public Way".

Existing improvements shall include but are not limited to permanent surfacing, curbs, gutters, sidewalks, planted areas, ditches, driveways, culverts, fences, and walls. All improvements shall be reconstructed to equal or better conditions in all respects than the existing improvements removed.

4.15.2 GRAVEL SURFACE: Where trenches are excavated through gravel surfaced areas such as roads and shoulders, parking areas, unpaved driveways, etc., the gravel surface shall be restored and maintained as follows:

A. The gravel shall be placed deep enough to provide a minimum of eight inches of material.

B. The gravel shall be placed in the trench at the time it is backfilled. The surface shall be maintained by blading, sprinkling, rolling, adding gravel, etc., to maintain a safe, uniform surface satisfactory to the City Engineer. Excess material shall be removed from the premises immediately.

C. Material for use on gravel surfaces shall be obtained from sound, tough, durable gravel or rock meeting the following requirements for grading:

1 Inch Gradation

Sieve Size	Ideal Gradation (Percent Passing)	Ideal Gradation (Tolerance)
1 inch	100	0
1/2 inch	85	+/- 6
No. 4 sieve	55	+/- 6
No. 16 sieve	31	+/- 4
No. 200 sieve	9	+/- 2

4.15.3 BITUMINOUS SURFACE: Where trenches are excavated through bituminous surfaced roads, driveways, parking areas, etc., the surface shall be restored and maintained as follows:

A. A temporary gravel surface shall be placed and maintained as required in Paragraph 16.2 above after the required backfill and compaction of the trench has been accomplished.

B. The gravel shall be placed to such depth as to provide eight inches thickness below the bottom of the asphalt pavement and shall be brought flush with the paved surface.

C. The area over trenches to be resurfaced shall be graded and rolled to provide a subgrade

which is firm and unyielding. Density of the subgrade materials shall be 95% of AASHTO T-180. Mud or other soft or spongy material shall be removed and the void filled with gravel and rolled and tamped thoroughly in layers not exceeding six inches in thickness. The edges of trenches which are broken down during the making of subgrade shall be removed and trimmed neatly before resurfacing.

D. Before any permanent resurfacing is placed, the Contractor shall trim the existing paving to clean, straight lines as nearly parallel to the centerline of the trench as practicable. Said straight lines shall be thirty feet minimum length and no deviations from such lines shall be made except as specifically permitted by the City Engineer.

E. Existing bituminous paving shall be cut back a minimum of six inches beyond the limits of any excavation or cave-in along the trench so that the edges of the new paving will rest on at least six inches of undisturbed soil

F. As soon as is practical, weather permitting, the bituminous surface shall be restored by standard paving practices to the thickness shown on the Drawings and/or defined in the Proposal, or matching the existing pavement cut during excavation.

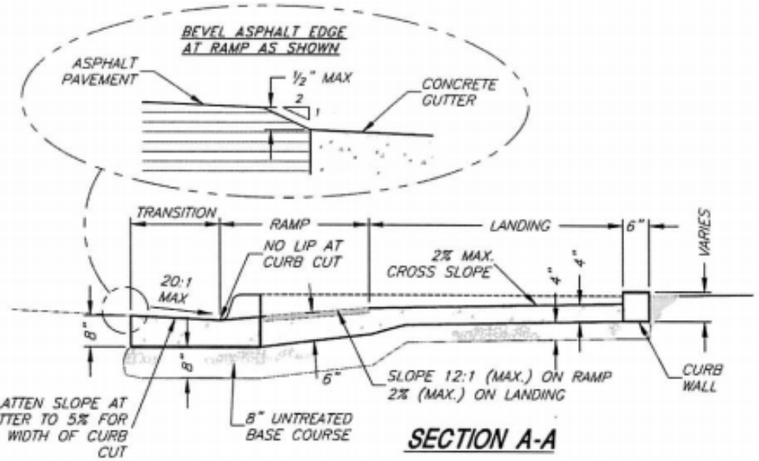
G. Pavement restoration shall include priming of pavement of edges and sub-base with Type MC-70 bituminous material and placing and rolling plant hot mix bituminous material to the level of the adjacent pavement surfaces.

4.15.4 CONCRETE SURFACES: All concrete curbs, gutters, sidewalks, and driveways shall be removed and replaced to the next joint or scoring line beyond the actually damaged or broken sections; or in the event that joints or scoring lines do not exist or are three or more feet from the removed or damaged section, the damaged portions shall be removed and reconstructed to a neat "saw cut" vertical plane face. All new concrete shall match, as nearly as possible, the appearance of adjacent concrete improvements. Where necessary, lamp black or other pigments shall be added to the new concrete to obtain the desired results.

All concrete work shall conform to the requirements of Section 4.5 of these specifications.

SECTION 5.0

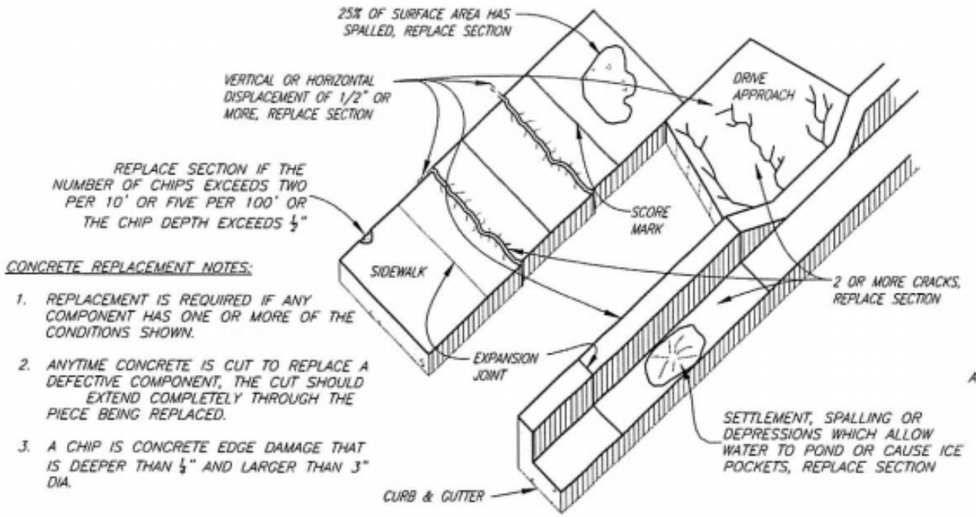
PUBLIC WORKS STANDARD DRAWINGS



SECTION A-A

ADA RAMP NOTES:

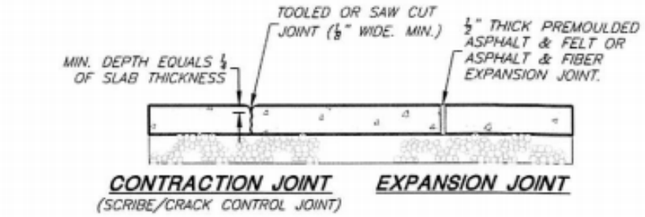
1. WHERE DESIGNATED BY THE CITY, ALTERNATE RAMP DESIGNS MAY BE USED. SUBMIT ENGINEERED CONSTRUCTION PLANS TO CITY ENGINEER AND THE CITY PUBLIC WORKS DEPARTMENT FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.
2. USE THE SLOPE TABLE BELOW FOR RAMP CONSTRUCTION. THE USE OF FLARES, CURB WALLS, ETC. ARE AT THE DISCRETION OF THE ENGINEER.
3. LOCATE CURB CUT WITHIN CROSSWALK.
4. RAMP GRADE BREAK MUST BE PERPENDICULAR TO THE RUNNING SLOPE.



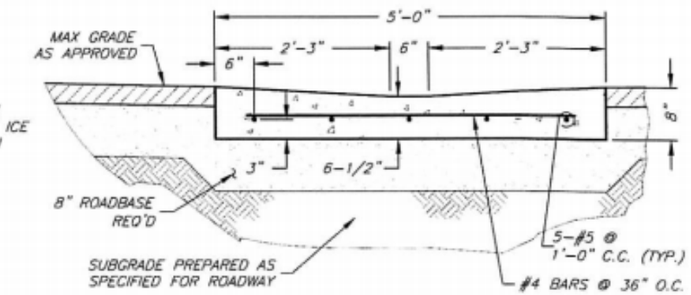
CONCRETE REPLACEMENT NOTES:

1. REPLACEMENT IS REQUIRED IF ANY COMPONENT HAS ONE OR MORE OF THE CONDITIONS SHOWN.
2. ANYTIME CONCRETE IS CUT TO REPLACE A DEFECTIVE COMPONENT, THE CUT SHOULD EXTEND COMPLETELY THROUGH THE PIECE BEING REPLACED.
3. A CHIP IS CONCRETE EDGE DAMAGE THAT IS DEEPER THAN 1/2" AND LARGER THAN 3" DIA.

DEFECTIVE CONCRETE REPLACEMENT CRITERIA

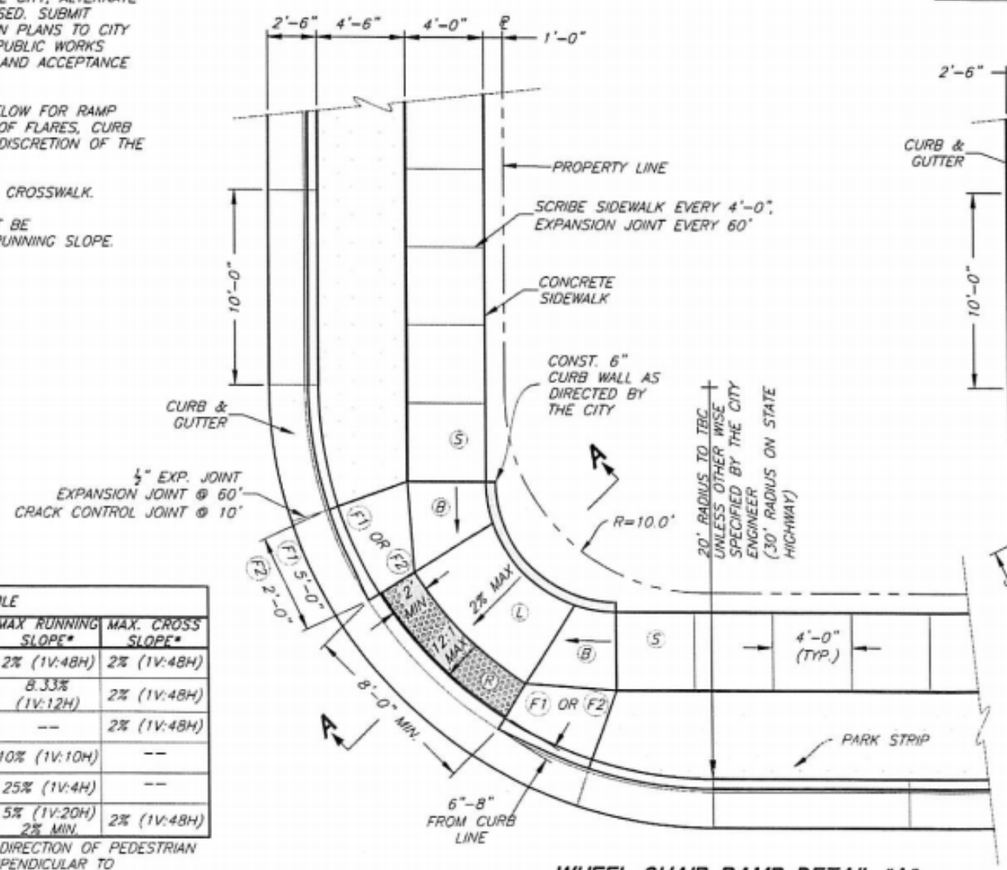


JOINT DETAIL



CROSS DRAIN SECTION

(WHERE APPROVED BY CITY PUBLIC WORKS DIRECTOR AND THE CITY ENGINEER)

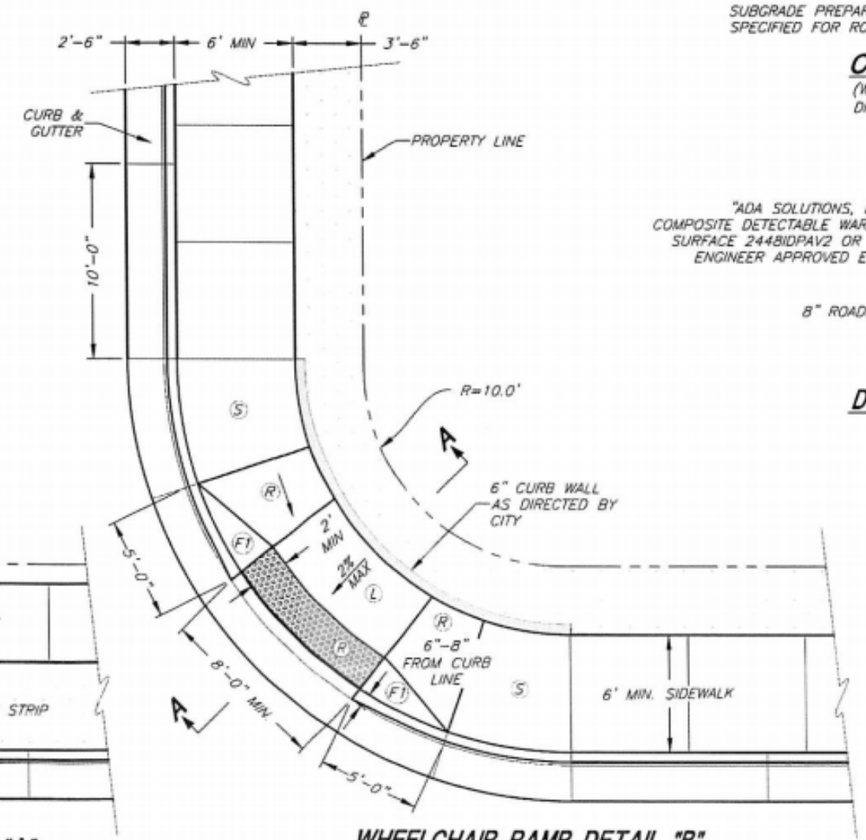


SLOPE TABLE			
	ITEM	MAX RUNNING SLOPE*	MAX. CROSS SLOPE*
L	LANDING	2% (1V:48H)	2% (1V:48H)
R	RAMP	8.33% (1V:12H)	2% (1V:48H)
S	SIDEWALK	--	2% (1V:48H)
F1	TRAVERSABLE SURFACE	10% (1V:10H)	--
F2	NON-TRAVERSABLE SURFACE	25% (1V:4H)	--
B	BLENDED TRANSITION	5% (1V:20H) 2% MIN.	2% (1V:48H)

* RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. CROSS SLOPE IS PERPENDICULAR TO PEDESTRIAN TRAVEL.

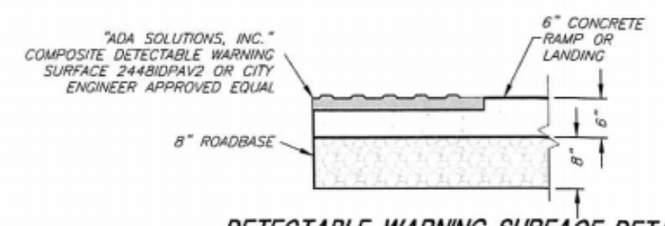
WHEEL CHAIR RAMP DETAIL "A"

CITY STANDARD (WITH PARK STRIP)



WHEELCHAIR RAMP DETAIL "B"

REQUIRES WRITTEN CITY APPROVAL (WITHOUT PARK STRIP)



DETECTABLE WARNING SURFACE DETAIL

DETECTABLE WARNING SURFACE NOTES:

1. LOCATE DETECTABLE WARNING SURFACE SO THAT THE EDGE NEAREST THE CURB LINE OR OTHER POTENTIAL HAZARD IS 6 TO 8 INCHES FROM THE CURB LINE OR OTHER POTENTIAL HAZARD. PROVIDE 2-FOOT MINIMUM DEPTH.
2. PROVIDE DETECTABLE WARNING SURFACE FOR FULL WIDTH OF CURB CUT.
3. THE DETECTABLE WARNING SURFACE DOMES SHALL BE ORIENTED SUCH THAT THE ROWS ARE PARALLEL WITH THE DIRECTION OF PEDESTRIAN TRAVEL TO THE RAMP ON THE OPPOSITE SIDE OF THE STREET.
4. THE STANDARD COLOR FOR THE DETECTABLE WARNING SURFACE SHALL BE DARK GRAY OR PRE-APPROVED CONTRASTING COLOR. WHEN THE EXISTING SIDEWALK COLOR IS NOT STANDARD CONCRETE, THE COLOR OF THE DETECTABLE WARNING SURFACE SHALL BE DETERMINED BY THE CITY ENGINEER OR AUTHORIZED REPRESENTATIVE.
5. WHEN A DETECTABLE WARNING SURFACE DOME IS CUT, THE REMAINING PORTION OF THE DOME SHALL BE BEVELED TO A MAXIMUM SLOPE OF 1:2.

PROJECT ENGINEER:	REV.	DATE	APPR.	SCALE: N.T.S.	DESIGNED MEW / DRAWN RED / CHECKED MEW	JONES & ASSOCIATES CONSULTING ENGINEERS, 6080 Fashion Point Drive, South Ogden, Utah 84403 (801) 476-9767
DATE						

NORTH OGDEN CITY CORPORATION
PUBLIC WORKS STANDARDS

PUBLIC ROADS - TYPICAL ADA RAMP & DEFECTIVE CONCRETE REPLACEMENT DETAILS

SHEET: RD-04 OF 26 SHEETS