

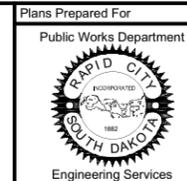
MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION TOWER ROAD to FLORMANN STREET

PROJECT NUMBER: 11-1926 CIP NO.50840

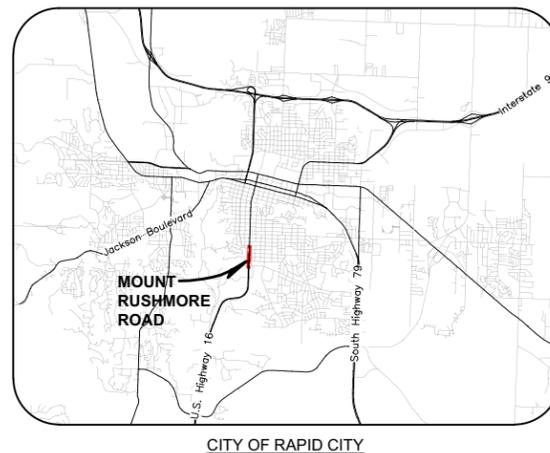
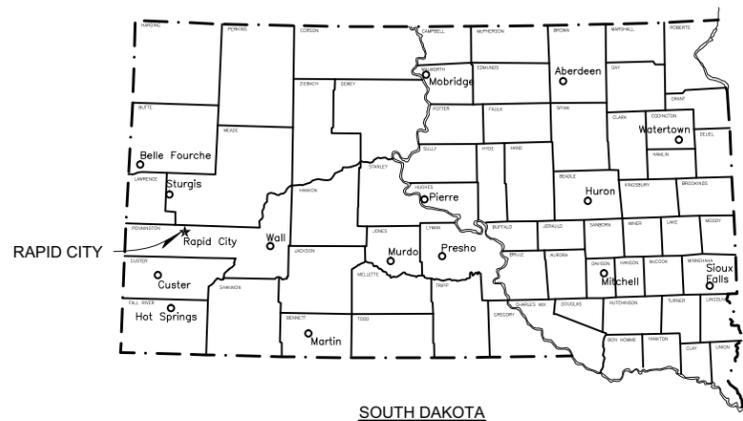
PCN X02D

RAPID CITY, SOUTH DAKOTA

DECEMBER 18, 2013



ONE CALL
BEFORE DIGGING
1-800-781-7474



INDEX OF SECTIONS

- SECTION A: ESTIMATE OF QUANTITIES, GENERAL PROJECT NOTES, & INFORMATION
- SECTION C: TRAFFIC CONTROL PLANS
- SECTION D: EROSION AND SEDIMENT CONTROL PLANS
- SECTION G: UTILITY PLANS
- SECTION H: LANDSCAPING PLANS

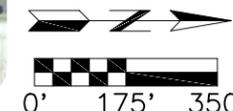
We, the undersigned, certify that we have read and understand the provisions contained in the City of Rapid City Standard Specifications for Public Works Construction, current edition and the City of Rapid City's adopted Design Criteria Manuals. The drawings and specifications contained here within, to the best of our knowledge, were prepared in accordance with these documents or a properly executed exception to the Standard Specifications and/or Infrastructure Design Criteria Manual has been secured.

Richard A. Marsh
Richard A. Marsh, P.E. Date: 12-18-13

Patrick H. Wyss
Patrick H. Wyss, PLA Date: 12/18/2013



VICINITY MAP



3

SECTION A

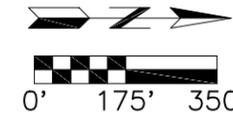
ESTIMATE OF QUANTITIES, GENERAL PROJECT NOTES, & INFORMATION



PROJECT LOCATION MAP

INDEX OF SHEETS

SHEET NUMBER	DESCRIPTION
A1	PROJECT LOCATION WITH INDEX
A2-A3	ESTIMATE OF QUANTITIES
A4-A5	GENERAL PROJECT NOTES
A6	SURVEY CONTROL DATA
A7-A8	HORIZONTAL ALIGNMENT DATA
A9-A10	PROPERTY OWNERSHIP INFORMATION
A11	TOPOGRAPHY LEGEND



June 09, 2014 14:25:32 PLO: Planning: MILES@CETEC (SCHULLE) \\MAN-DATA\CETEC\PROJECTS & PROPOSALS\1119.00 MF. RUSHMORE RD. UTILITIES RECONSTRUCTION\DRAWINGS\SHEETS\PHASE 1 - TOWER TO FLORHANN\

cetec
ENGINEERING SERVICES, INC.
1560 Concourse Drive
Rapid City, SD 57703
Phone: (605) 341-7800
Fax: (605) 341-7864
www.cetecengineering.com

Wyss Associates, Inc.
Landscape Architecture
Golf Course Architecture
Parks & Recreation Design
728 Sixth Street Rapid City, South Dakota 57701-3670
Ph. 605.348.2268 Fax 605.348.6506
email: info@wyssassociates.com



Plans Prepared For
Public Works Department
RAPID CITY
SOUTH DAKOTA
Engineering Services

Prepared By:

ENGINEERING SERVICES, INC.
 1560 Concourse Drive
 Rapid City, SD 57703
 Phone: (605) 341-7800
 Fax: (605) 341-7864
 www.cetecengineering.com

Prepared For:
 Public Works Department

 Engineering Services

Scale:
 Designed By: RM
 Drawn By: RM
 Design Date: 12.18.2013
 Print Date: REV 6.27.2014 RM
 Internal Job No: 11119.02
 Surveyed By: SDDOT
 Survey Date: 2012
 Project Number: 11-1926, CIP NO.50840, PCN X02D

Revisions:
 Number: Description:
 1 Section C, G, & H Revised
 2 Section G Quantities Revised

MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION

SECTION C ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0525	Linear Delineation System Panel, Barrier Mounted	28	Each
634E0700	Traffic Control Movable Concrete Barrier	14	Each
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	70	Each
734E5010	Sweeping	10	Hour

SECTION D ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
100E0020	Clear and Grub Tree	1	Each
100E0100	Clearing	Lump Sum	LS
110E1690	Remove Sediment	20	CuYd
110E1693	Remove Erosion Control Wattle	1277	Ft
110E1695	Remove Sediment Filter Bag	276	Ft
230E0020	Placing Contractor Furnished Topsoil	130	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
730E0210	Type F Permanent Seed Mixture	20	Lb
731E0100	Fertilizing	972	Lb
734E0102	Type 2 Erosion Control Blanket	2354	SqYd
734E0154	12" Diameter Erosion Control Wattle	1277	Ft
734E0165	Remove and Reset Erosion Control Wattle	200	Ft
734E0180	Sediment Filter Bag	276	Ft
734E0185	Remove and Reset Sediment Filter Bag	110	Ft
734E3000	Water Pollution Control	Lump Sum	LS

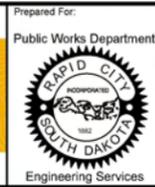


SECTION G ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3200	Construction Staking	Lump Sum	LS
110E0330	Remove Concrete Channel	8.2	SqYd
110E0370	Remove Curb Stop	7	Each
110E0460	Remove Manhole	5	Each
110E0480	Remove Manhole Frame and Lid	2	Each
110E0520	Remove Sewer Pipe	42	Ft
110E1010	Remove Asphalt Concrete Pavement	212.6	SqYd
110E1100	Remove Concrete Pavement	71.1	SqYd
110E1950	Remove Contaminated Water	50	MGal
110E5740	Salvage Fire Hydrant	5	Each
110E5765	Salvage Valve and Valve Box	22	Each
110E7710	Remove Manhole Frame and Lid for Reset	3	Each
120E0900	Contaminated Material Excavation	500	CuYd
250E0010	Incidental Work	Lump Sum	LS
260E1010	Base Course	117.0	Ton
260E6010	Granular Material	100.0	Ton
320E1200	Asphalt Concrete Composite	63.0	Ton
451E0604	4" PVC Water Main	125	Ft
451E0606	6" PVC Water Main	210	Ft
451E0608	8" PVC Water Main	484	Ft
451E0612	12" PVC Water Main	2040	Ft
451E0802	1" Copper Pipe	95	Ft
451E0806	1.5" Copper Pipe	58	Ft
451E0808	2" Copper Pipe	20	Ft
451E1008	8" PVC Sewer Pipe	1208	Ft
451E1204	4" Sewer Service	220	Ft
451E1206	6" Sewer Service	60	Ft
451E1504	4" Sanitary Sewer Service Cleanout	7	Each
451E1506	6" Sanitary Sewer Service Cleanout	1	Each
451E2212	8"x4" Pipe Tee	1	Each
451E2213	8"x6" Pipe Tee	4	Each
451E2230	12"x4" Pipe Tee	3	Each
451E2231	12"x6" Pipe Tee	5	Each
451E2232	12"x8" Pipe Tee	4	Each
451E2234	12"x12" Pipe Tee	2	Each
451E2413	8"x6" Pipe Reducer	4	Each
451E2431	12"x6" Pipe Reducer	1	Each
451E2432	12"x8" Pipe Reducer	2	Each
451E2754	16"x12" Tapping Tee	1	Each
451E2802	1" Corporation Stop with Tapping Saddle	3	Each
451E2806	1.5" Corporation Stop with Tapping Saddle	1	Each
451E2808	2" Corporation Stop with Tapping Saddle	1	Each
451E2902	1" Curb Stop with Box	3	Each
451E2906	1.5" Curb Stop with Box	1	Each
451E2908	2" Curb Stop with Box	1	Each
451E3006	6" Pipe Bend	11	Each
451E3008	8" Pipe Bend	3	Each
451E3012	12" Pipe Bend	7	Each
451E3104	4" Pipe Cap	3	Each
451E3204	4" Pipe Coupling	1	Each
451E3206	6" Pipe Coupling	4	Each

SECTION G ESTIMATE OF QUANTITIES CONT.

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
451E3208	8" Pipe Coupling	6	Each
451E3212	12" Pipe Coupling	3	Each
451E3306	6" Pipe Transition Coupling	1	Each
451E3412	6" Pipe Plug	1	Each
451E4204	4" Gate Valve with Box	4	Each
451E4206	6" Gate Valve with Box	1	Each
451E4208	8" Gate Valve with Box	7	Each
451E4212	12" Gate Valve with Box	13	Each
451E4380	Tracer Wire Access Box	8	Each
451E4585	Fire Hydrant with Auxiliary Valve & Box	8	Each
451E4903	Type 2 Foundation Material	500	Ton
451E4904	Type 3 Foundation Material	500	Ton
451E4918	Imported Trench Backfill	1200	CuYd
451E5010	Rock Excavation, Trench	230	CuYd
451E5102	Bore and Jack 2" Pipe	65	Ft
451E6095	Remove and Reset Valve and Box	1	Each
451E6100	Reconnect Water Service	10	Each
451E6105	Connect To Existing Water Main	8	Each
451E7010	Reconnect Sewer Service	6	Each
451E7016	Connect to Existing Sewer Main	3	Each
451E7020	Sewer Bypass Pumping	Lump Sum	LS
451E7402	Test Station	8	Each
462E0200	Controlled Density Fill	10	CuYd
650E6060	6" Concrete Valley Gutter	18	Ft
671E1048	48" Manhole	9	Each
671E1348	48" Drop Manhole	1	Each
671E4048	48" Manhole Riser Section	6	Ft
671E4548	48" Manhole Cone Section	7	Ft
671E5502	2" Adjusting Ring for Manhole	3	Each
671E5504	4" Adjusting Ring for Manhole	5	Each
671E5510	Extra Depth for 48" Manhole	46	Ft
617E6035	Special Manhole Frame & Lid	8	Each
671E6040	Manhole Frame	2	Each
671E6050	Manhole Lid	2	Each
671E6100	Manhole Frame & Lid, Install	2	Each
671E7000	Reset Manhole Frame and Lid	3	Each
671E7010	Adjust Manhole	2	Each
671E7012	Adjust and Seal Manhole	3	Each
900E2090	AASHTO T-180 Soil Test	3	Each



Scale:
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 Drawn By: RM
 Design Date: 12.18.2013
 Print Date: REV 2.26.2014 RM
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 Project Number: 11-1926, CIP NO.50840, PCN X02D

Revisions:	Description:
1	Section H Revised

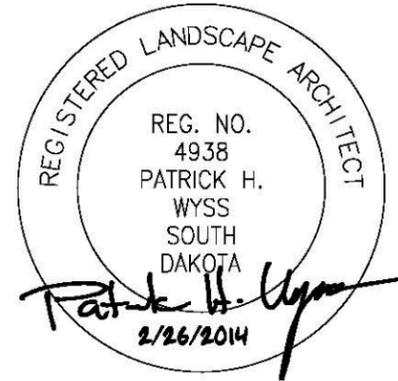
MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION

Sheet Title:
SECTION A
ESTIMATE OF
QUANTITIES

Sheet No:
A3
of
A11

SECTION H ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
120E0010	Unclassified Excavation	1082	CuYd
230E0020	Contractor Furnished Topsoil	1082	CuYd
260E1020	Base Course	157	CuYd
380E2574	4" Barrier Type Colored & Patterned Median PCC Pavement	902	SqYd
651E0540	4" Colored Concrete Sidewalk	2151	SqFt
651E0750	5" Reinforced Colored Concrete Sidewalk	1300	SqFt
735E0110	1 Gallon Perennial Plant, Furnish and Plant	480	Each
735E1205	1 Gallon Deciduous Shrub, Furnish and Plant	66	Each
735E1210	2 Gallon Deciduous Shrub, Furnish and Plant	493	Each
735E1400	10' Coniferous Evergreen, Furnish and Plant	66	Each
735E1520	2 Gallon Coniferous Shrub, Furnish and Plant	135	Each
735E2220	2" Caliper Deciduous Tree, Furnish and Plant	17	Each
735E2230	3" Caliper Deciduous Tree, Furnish and Plant	41	Each
735E5010	1 Gallon Ornamental Grass, Furnish and Plant	276	Each
831E1010	Geogrid Reinforcement	72.3	SqYd
831E1011	Install Geogrid Reinforcement	72.3	SqYd
900E5149	Landscaping Rock	2.5	CuYd
900E5153	Mulch Ring	107	Each
900E5156	3" Depth Shredded Bark Mulch	1622	SqYd
900E5430	Irrigation System	Lump Sum	LS
900E6005	Concrete Foundation	1	Each



Prepared By:

 1560 Concourse Drive
 Rapid City, SD 57703
 Phone: (605) 341-7800
 Fax: (605) 341-7864
 www.cetecengineering.com

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 Engineering Services

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Revisions:	Number:	Description:

MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION

Sheet Title:
 GENERAL
 PROJECT
 NOTES

Sheet No:
 A4
 of
 A11

SPECIFICATIONS

Standard Specifications shall be the City of Rapid City Standard Specifications for Public Works Construction, 2007 Edition, with current updates, revisions, except as modified herein via plans, plan notes, and special provisions included in the contract/bid documents.

Corrosion Specifications shall be City of Rapid City Section 8B and the standard Details for Corrosion Control.

PROJECT DESCRIPTION, COORDINATION AND SCHEDULING

Work on the project includes City of Rapid City water and sewer utility infrastructure as well as landscaping specific areas of the project.

All work on this project shall be closely coordinated with project NH 0016(78)67 PCN 01TH, the roadway portion of the Mount Rushmore Road reconstruction project.

Work listed in these plans shall also be coordinated with the traffic control for Mount Rushmore Road, US Highway 16 (Project NH 0016(78)67).

The Contractor shall coordinate the work and water service shutdown with the City of Rapid City Utility Maintenance Staff and the affected property owners at least 48 hours prior to the work. The Contractor shall complete all water service shut downs and tie-ins so the landowner/business maintains water service during normal business hours. This will require water service tie-ins either before or after hours. Water service shall always be restored as soon as possible. Temporary taps, caps, plugs, hydrants etc. and or water service connections to maintain water service shall be considered incidental to the associated bid items.

Stationing and offsets are based on the roadway centerline alignments for Mount Rushmore Road and intersecting streets. Horizontal alignment data has been included herein.

The Contractor will be required to attend preconstruction as well as construction progress meetings to coordinate the work, discuss issues with the public, and provide a look ahead at project work. It is estimated that these meetings will be on a weekly basis. The Engineer will establish frequency, time, and location of the periodic meetings.

Section C of this plan lists work only for the traffic control required for the 12" water main tie-in at Oakland/Tower Street intersection. All other water, sewer, and landscaping work shall be completed within the proposed construction phasing and traffic control listed in project NH 0016(78)67.

Section D of this plan lists work for the site restoration of the offsite water main from the Tower/Oakland intersection west to the east side of Mount Rushmore Road as shown in the plan sheets. All other site restoration work shall be completed by project NH 0016(78)67 with the exception of the proposed plantings located in Section H of this plan set. Also included in this section is a Storm Water Pollution Prevention Plan(SWPPP) to be coordinated with the SWPPP for NH 0016(78)67.

GEOTECHNICAL REPORT

The proposed work includes subsurface conditions which were evaluated by Terracon Consultants, Inc. A copy of the Geotechnical Engineering Report titled "Mt. Rushmore Road Utility Reconstruction, Tower Road to St. Patrick Street, Rapid City, South Dakota, November 14, 2011, Terracon Project No. B4115030, City of Rapid City Project No. SSW11-1926/CIP No. 50840" is included in the bid documents and the Contractor is urged to review the report. The report is for information only and is not a guarantee of subsurface conditions. It should be noted that groundwater was present at the time of sampling in several of the bore holes. Also note the presence of sandstone and sandstone lenses at various locations.

SUBMITTALS

Submittals are required for all materials to be installed under the contract, including but not limited to:

- Construction schedule plan consistent with the Contractor's construction schedule
- A list of key personnel
- Subcontractors and suppliers
- Pipes, fittings, valves, couplings & appurtenances etc.
- Corrosion materials and suppliers
- Concrete structures & castings
- Bedding, foundation and all other specified materials
- All City and State permits required per plans and specifications
- Sewer bypass pumping plan
- Water main disinfection and de-chlorination plan
- Traffic control plan
- Erosion control materials/products
- Dewatering and sediment collection plan.
- City of Rapid City Trench and Utility Licenses
- Seed and Fertilizer
- Topsoil
- Related work and others as required in the Specifications and these plans.

At least seven (7) working days before his/her need for approval, the Contractor shall forward to the Engineer a minimum of five (5) copies of submittals for all Contractor-furnished products. Submittals shall clearly identify any deviation from the Specifications, and shall be certified and dated by the Contractor. Submittals will be accepted only from the Contractor.

CONSTRUCTION WORK LIMITS/STAGING AREA.

The Contractor shall limit all construction activities to the street right-of-way and project easements. The Contractor shall be responsible for any and all disturbance outside of the work limits on this project at no cost to the Owner. Staging/stockpile locations shall be acquired by the Contractor. Quantities for final restoration of the staging areas have not been included in the estimated quantities and shall be the responsibility of the Contractor. Security of the stage/storage site(s) is the responsibility of the Contractor.

CONTRACTOR FURNISHED PROGRESS SCHEDULES

At least two weeks prior to the start of the work the Contractor shall furnish the Engineer two copies of a bar chart method progress schedule. The Schedule shall consist of a construction schedule and a brief written narrative in accordance with section 7.70 of the Standard Specifications and coordinated with the proposed sequence for the roadway work in project NH 0016(78)67. The schedule shall contain at a minimum the following information:

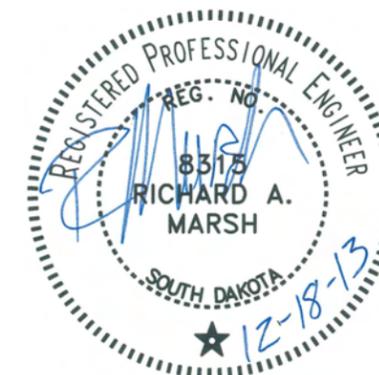
1. A time scale to graphically show percentage of work scheduled for completion within the contract completion requirements.
2. Definition and relation of work activities to contract pay items.
3. Work activities (prime contractor and all subcontractor activities) in the order the work will be performed including submittals, approvals, deliveries, and temporary traffic control.
4. All major work activities that are controlling factors in the completion of the work.
5. The time required for each activity and its relationship in time to other activities.
6. The total expected time to complete all work.
7. The expected work shifts in days per week and hours per day and the days when work is not expected to be performed.

INCIDENTAL WORK

Items not included in the bid form as a pay item under the contract but are included in the plans and specifications as needed to complete the work shall be incidental to the contract lump sum price for Incidental Work. Payment for Incidental work will be made per Section 19 of the specifications.

CONSTRUCTION STAKING

The Contractor shall furnish all construction staking on the project in accordance with the Standard Specifications. Electronic files will not be made available to the Contractor. All costs for construction staking shall be incidental to the contract lump sum price for Construction Staking.



Prepared By:

cetec
 ENGINEERING SERVICES, INC.
 1560 Concourse Drive
 Rapid City, SD 57703
 Phone: (605) 341-7800
 Fax: (605) 341-7864
 www.cetecengineering.com

Prepared For:
 Public Works Department

 Engineering Services

Scale:	Designed By:	Drawn By:
	RM	RM
Design Date:	Print Date:	
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11119.02	2012	
Surveyed By:	Project Number:	
SDDOT	11-1926, CIP NO.50840, PCN X02D	

Revisions:	Description:
Number:	
1	Added Snow Removal Note

MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION

Sheet Title:	Sheet No:
GENERAL PROJECT NOTES	A5 of A11

UTILITY COMPANY NOTIFICATION

The Contractor shall be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor shall contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

The Contractor shall be responsible for protecting all existing utilities in place. The Contractor shall coordinate any relocation with the utility companies. The Contractor shall utilize the South Dakota One Call (1-800-781-7474) notification process to provide advance notice of at least 48 hours, excluding weekends and holidays, to inform all South Dakota underground facility operators of intended excavation. The Contractor shall contact all utility companies before work is commenced. Protection and coordination of relocations or adjustment of utilities is the responsibility of the Contractor and no additional payment will be made for this work.

PERMITS

The Contractor shall be responsible for obtaining the following permits. All fees and costs associated with obtaining the permits shall be incidental to the contract lump sum price for Incidental Work:

1. Coverage under the SD DENR General Permit for Storm Water Discharges Associated with Construction Activities.
2. SD DENR Dewatering Permit – General Permit to discharge under the South Dakota Surface Water Discharge System for temporary discharge activities in South Dakota
3. City of Rapid City Erosion and Sediment Control Permit
4. City of Rapid City Grading Permit
5. City of Rapid City Air Quality Construction Permit
6. City of Rapid City ROW Permit
7. SDDOT Permit to Occupy ROW

WASTE DISPOSAL SITE

The Contractor will be required to furnish or haul waste materials to a permitted site for the lawful disposal of construction/demolition debris generated by this project in accordance with the specifications. Construction/demolition debris may not be disposed of within the ROW.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Engineer.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

MATERIAL TICKET SUBMITTALS

The Contractor shall submit all tickets for measurement and payment to the Inspector within 48 hours, per Standard Specifications. Any ticket received later than 48 hours will not be accepted and payment for that item will not be made.

PRESS RELEASE ANNOUNCEMENTS

The Contractor shall prepare a Press Release to be released 48 hours prior to any phase change or any other major change that affects traffic flow. A copy of the Press Release shall be given to the Engineer three days prior to the change. The Contractor shall be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. All costs for the Press Releases shall be incidental to the various bid items.

EXPLORATORY EXCAVATION

The Contractor shall provide exploratory excavation as needed for the completion of the work under the contract. No separate payment for exploratory excavation will be made. The Contractor is responsible for all work necessary to complete the project.

MAIL DELIVERY

The Contractor shall be responsible to contact and coordinate with the appropriate postal representative to ensure delivery of mail to businesses located within the project limits. This work shall be considered incidental to the contract lump price for Incidental Work.

WARRANTY PERIOD

The warranty period for this project shall start when the project is 100% complete and a letter of acceptance has been issued by the City of Rapid City per Section 7.65 of the Standard Specifications.

WEEKEND, HOLIDAY AND NIGHT WORK

Section 7.48 of the specifications restricts weekend, holiday, and night work.

Work on Saturdays and Sundays will be granted on this contract however it is expected that the Contractor will notify the Engineer and schedule this work according to the following schedule:

Permission to work on Saturday shall be requested at least 72 hours in advance of the given Saturday.

Permission to work on Sunday shall be requested at least 72 hours in advance of the given Sunday.

No work will be allowed on legal holidays except for emergency purposes per Section 7.48. Night work will be restricted per the specifications unless it is necessary for water/sewer service tie-in work in which case the Contractor shall coordinate with the Engineer, City of Rapid City Utility Maintenance Staff, and the affected property/business Owner at least 48 hours in advance of the service shut down.



Prepared By:

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 1560 Concourse Drive
 Rapid City, SD 57703
 Phone: (605) 341-7800
 Fax: (605) 341-7864
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Prepared For:

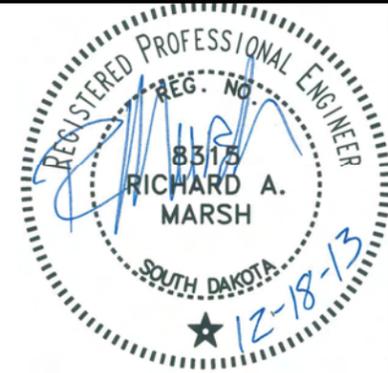
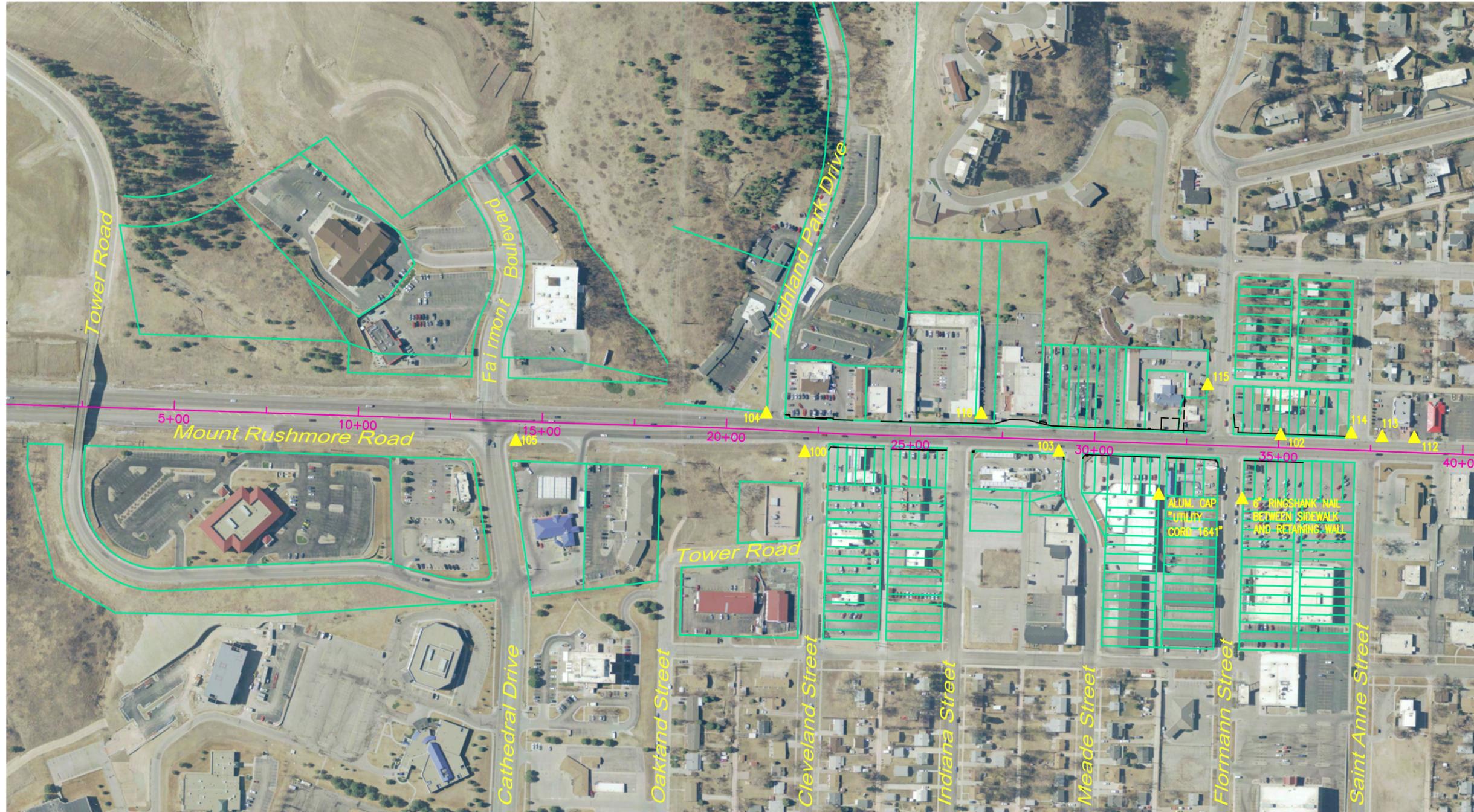
 Public Works Department
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Scale: AS NOTED
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 Survey Date: 2012

Revisions:	Description:

MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION

Sheet Title:	Sheet No:
SURVEY	A6
CONTROL	of
DATA	A11



CONTROL POINT TABLE

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION	STATION	OFFSET
CP-100	643110.75	1206676.11	3362.83	CP CORC 1024	22+15.80	55.76'R
CP-102	644402.96	1206630.63	3335.11	CP DOT 2	35+04.76	32.79'L
CP-103	643800.92	1206674.57	3357.13	CP DOT 3	29+04.64	32.49'R
CP-104	643006.47	1206570.84	3370.74	CP DOT 4	21+06.23	43.99'L
CP-105	642326.59	1206645.36	3412.21	CP DOT 5	14+30.00	53.89'R
CP-112	644765.68	1206638.01	3326.67	CP PK NAIL	38+67.51	38.15'L
CP-113	644678.42	1206635.67	3327.98	CP PK NAIL	37+80.22	37.40'L
CP-114	644594.56	1206625.31	3329.28	CP PCAP	36+96.07	44.81'L
CP-115	644205.03	1206494.82	3345.97	CP REBAR	33+02.09	161.56'L
CP-116	643589.95	1206572.31	3361.28	CP PK NAIL	26+90.19	62.26'L

THE COORDINATES SHOWN ON THIS SHEET ARE BASED ON THE SOUTH DAKOTA STATE PLANE COORDINATE SYSTEM.
 SOUTH ZONE (NAD 83/96) SF = 0.9997870216
 THE ELEVATIONS SHOWN ON THIS SHEET ARE BASED ON NAVD 88

June 05, 2014, 9:31:05 AM
 C:\WORK\DATA\CETEC\PROJECTS & PROPOSALS\11119.00_Mt. RUSHMORE RD. UTILITIES RECONSTRUCTION\DRAWINGS\SHEETS\PHASE 1 - TOWER TO FLORMANN\

Prepared By:

 1560 Concourse Drive
 Rapid City, SD 57703
 Phone: (605) 341-7800
 Fax: (605) 341-7864
 www.cetecengineering.com

Prepared For:

 Public Works Department
 Engineering Services

Scale:
 Designed By: RM
 Drawn By: RM
 Design Date: 12.18.2013
 Print Date: 12.18.2013
 Internal Job No: 11119.02
 Surveyed By: SDDOT
 Survey Date: 2012
 Project Number: 11-1926, CIP NO.50840, PCN X02D

Revisions:	Number:	Description:

MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION

Sheet Title:	Sheet No:
HORIZONTAL ALIGNMENT DATA	A7 of A11

ALIGNMENTS

Alignment information provided below was generated using data obtained from SDDOT project alignments. Please contact the Engineer immediately if any discrepancies are discovered between the information provided below and the alignment information provided in the roadway plan set for Project NH 0016(78)67.

MOUNT RUSHMORE ROAD/US HIGHWAY 16

Start Station	End Station	Type	Start Point	End Point	Length	Radius	Direction	Delta angle	PI Station	PI Point
0+00'	17+00'	Line	(1206543.78',640899.18',0.00')	(1206600.51',642598.24',0.00')	1700.00'		N01°54'45"E			
17+00'	19+44.33'	Line	(1206600.51',642598.24',0.00')	(1206607.67',642842.46',0.00')	244.33'		N01°40'42"E			
19+44.33'	20+55.58'	Curve	(1206607.67',642842.46',0.00')	(1206612.17',642953.61',0.00')	111.24'	5000.00'		001°16'29"	19+99.96'	(1206609.30',642898.06')
20+55.58'	22+99.36'	Line	(1206612.17',642953.61',0.00')	(1206624.73',643197.07',0.00')	243.78'		N02°57'12"E			
22+99.36'	25+00.63'	Curve	(1206624.73',643197.07',0.00')	(1206631.05',643398.23',0.00')	201.27'	5000.00'		002°18'23"	24+00.01'	(1206629.91',643297.59')
25+00.63'	26+34.20'	Line	(1206631.05',643398.23',0.00')	(1206632.56',643531.79',0.00')	133.57'		N00°38'49"E			
26+34.20'	29+44.53'	Line	(1206632.56',643531.79',0.00')	(1206643.51',643841.93',0.00')	310.33'		N02°01'20"E			
29+44.53'	33+57.08'	Line	(1206643.51',643841.93',0.00')	(1206658.24',644254.21',0.00')	412.55'		N02°02'46"E			
33+57.08'	37+33.53'	Line	(1206658.24',644254.21',0.00')	(1206671.40',644630.43',0.00')	376.45'		N02°00'12"E			
37+33.53'	41+09.01'	Line	(1206671.40',644630.43',0.00')	(1206684.66',645005.68',0.00')	375.48'		N02°01'29"E			
41+09.01'	44+81.81'	Line	(1206684.66',645005.68',0.00')	(1206700.58',645378.14',0.00')	372.81'		N02°26'51"E			
44+81.81'	48+33.69'	Line	(1206700.58',645378.14',0.00')	(1206709.42',645729.91',0.00')	351.88'		N01°26'23"E			
48+33.69'	55+91.26'	Line	(1206709.42',645729.91',0.00')	(1206735.67',646487.03',0.00')	757.57'		N01°59'08"E			
55+91.26'	59+71.92'	Line	(1206735.67',646487.03',0.00')	(1206747.98',646867.48',0.00')	380.66'		N01°51'12"E			
59+71.92'	63+50.56'	Line	(1206747.98',646867.48',0.00')	(1206761.61',647245.88',0.00')	378.64'		N02°03'46"E			
63+50.56'	75+78.91'	Line	(1206761.61',647245.88',0.00')	(1206804.64',648473.47',0.00')	1228.34'		N02°00'28"E			
75+78.91'	76+91.46'	Curve	(1206804.64',648473.47',0.00')	(1206820.89',648584.61',0.00')	112.55'	511.00'		012°37'11"	76+35.41'	(1206806.62',648529.94')
76+91.46'	92+57.18'	Line	(1206820.89',648584.61',0.00')	(1207216.28',650099.59',0.00')	1565.73'		N14°37'38"E			

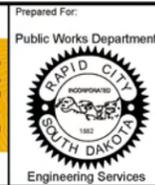


CATHEDRAL DRIVE-FAIRMONT BOULEVARD

Start Station	End Station	Type	Start Point	End Point	Length	Radius	Direction	Delta angle	PI Station	PI Point
0+00'	2+00.29'	Line	(1206413.11',642270.53',0.00')	(1206613.25',642262.83',0.00')	200.29'		S87°47'48"E			
2+00.29'	2+91.39'	Curve	(1206613.25',642262.83',0.00')	(1206704.10',642267.52',0.00')	91.10'	506.00'		010°18'55"	2+45.96'	(1206658.89',642261.07')
2+91.39'	4+60.78'	Line	(1206704.10',642267.52',0.00')	(1206871.80',642291.42',0.00')	169.40'		N81°53'17"E			

HIGHLAND PARK DRIVE

Start Station	End Station	Type	Start Point	End Point	Length	Radius	Direction	Delta angle	PI Station	PI Point
0+00'	0+16.53'	Line	(1206440.20',643045.90',0.00')	(1206456.31',643042.19',0.00')	16.53'		S77°00'34"E			
0+16.53'	1+12.88'	Curve	(1206456.31',643042.19',0.00')	(1206551.60',643028.84',0.00')	96.35'	550.00'		010°02'14"	0+64.83'	(1206503.37',643031.33')
1+12.88'	1+77.24'	Line	(1206551.60',643028.84',0.00')	(1206615.88',643025.52',0.00')	64.36'		S87°02'48"E			



Scale:	Revisions:
Designed By: RM	Number:
Design Date: 12.18.2013	Description:
Internal Job No: 11119.02	
Surveyed By: SDDOT	
Survey Date: 2012	
Project Number: 11-1926, CIP NO.50840, PCN X02D	

**MOUNT RUSHMORE ROAD
UTILITY RECONSTRUCTION**

Sheet Title:	Sheet No:
HORIZONTAL ALIGNMENT DATA	A8 of A11

CLEVELAND STREET

Start Station	End Station	Type	Start Point	End Point	Length	Direction
0+00'	5+32.82'	Line	(1206621.89',643142.16',0.00')	(1207154.49',643126.85',0.00')	532.82'	S88°21'11"E

INDIANA STREET

Start Station	End Station	Type	Start Point	End Point	Length	Direction
0+00'	2+54.10'	Line	(1206632.55',643531.25',0.00')	(1206886.55',643524.22',0.00')	254.10'	S88°24'54"E

MEADE STREET

Start Station	End Station	Type	Start Point	End Point	Length	Radius	Direction	Delta angle	PI Station	PI Point
0+00'	0+97.87'	Line	(1206643.50',643841.73',0.00')	(1206741.31',643838.23',0.00')	97.87'		S87°57'14"E			
0+97.87'	1+98.18'	Curve	(1206741.31',643838.23',0.00')	(1206837.93',643860.54',0.00')	100.31'	191.00'		030°05'30"	1+49.21'	(1206792.61',643836.40')
1+98.18'	2+19.43'	Line	(1206837.93',643860.54',0.00')	(1206856.68',643870.53',0.00')	21.25'		N61°57'16"E			
2+19.43'	3+18.82'	Curve	(1206856.68',643870.53',0.00')	(1206952.42',643892.60',0.00')	99.39'	189.00'		030°07'45"	2+70.30'	(1206901.58',643894.45')
3+18.82'	4+08.70'	Line	(1206952.42',643892.60',0.00')	(1207042.24',643889.33',0.00')	89.89'		S87°54'59"E			

FLORMANN STREET

Start Station	End Station	Type	Start Point	End Point	Length	Radius	Direction	Delta angle	PI Station	PI Point
0+00'	1+20.68'	Line	(1206339.40',644247.94',0.00')	(1206459.97',644243.05',0.00')	120.68'		S87°40'49"E			
1+20.68'	1+90.18'	Curve	(1206459.97',644243.05',0.00')	(1206529.39',644244.96',0.00')	69.50'	511.00'		007°47'33"	1+55.48'	(1206494.75',644241.64')
1+90.18'	3+90.60'	Line	(1206529.39',644244.96',0.00')	(1206728.91',644264.08',0.00')	200.43'		N84°31'38"E			
3+90.60'	4+52.40'	Curve	(1206728.91',644264.08',0.00')	(1206790.63',644266.24',0.00')	61.80'	511.00'		006°55'44"	4+21.54'	(1206759.70',644267.03')
4+52.40'	8+46.18'	Line	(1206790.63',644266.24',0.00')	(1207184.28',644256.24',0.00')	393.78'		S88°32'39"E			

TOWER-OAKLAND STREET WATER MAIN

Start Station	End Station	Type	Start Point	End Point	Length	Direction
0+00'	0+06.78'	Line	(1207014.03',642736.20',0.00')	(1207007.27',642735.80',0.00')	6.78'	S86°32'53"W
0+06.78'	3+46.50'	Line	(1207007.27',642735.80',0.00')	(1206667.67',642745.01',0.00')	339.72'	N88°26'46"W
3+46.50'	6+16.04'	Line	(1206667.67',642745.01',0.00')	(1206663.96',643014.53',0.00')	269.54'	N00°47'14"W
6+16.04'	6+23.24'	Line	(1206663.96',643014.53',0.00')	(1206656.77',643014.70',0.00')	7.20'	N88°37'38"W



1 John & Lenore B. deLorimer
Family Trust of 1989

Lots 2 and 3 of the SE1/4 of
Section 11 - Township 1 North - Range 7 East of the
B.H.M. to the City of Rapid City

2 RUBY TUESDAY'S
821 Faimont Boulevard
Phone: 343-1700
Owner: JR Investments, LLC

Lots 1 and 2 of Block 1 of
Walpole Heights Subdivision
formerly Tract C Revised of
Walpole Heights Subdivision
and Lot AB1 of the NE1/4 SE1/4 of
Section 11 - Township 1 North - Range 7 East
of the B.H.M. to the City of Rapid City

3 BLACK HILLS GOLD FACTORY OUTLET
2707 Mount Rushmore Road
Phone: 343-2226
Owner: R&R Reality, LLP

Lot AB formerly a portion of Lot H6
to the City of Rapid City

Prepared By:



1560 Concourse Drive
Rapid City, SD 57703
Phone: (605) 341-7800
Fax: (605) 341-7864
www.cetecengineering.com

Prepared For:
Public Works Department

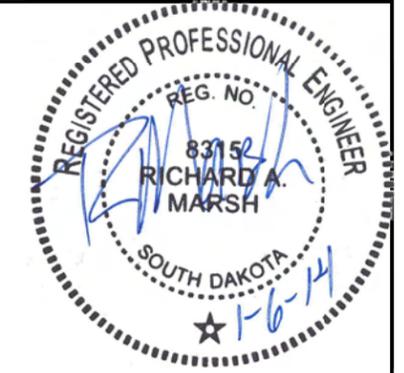
Engineering Services

Scale:	AS NOTED
Designed By:	RM
Drawn By:	MS
Design Date:	12.18.2013
Print Date:	REV 01.06.2014 RM
Internal Job No.:	11119.02
Surveyed By:	SDDOT
Survey Date:	2012
Project Number:	11-1926, CIP NO.50840, PCN X02D

Revisions:	1	Description:	BUDGET HOST INN NAME CHANGE
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MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION

Sheet Title:	PROPERTY	A9
	OWNERSHIP	of
	INFORMATION	A11



4 BEST WESTERN TOWN AND COUNTRY
2505 Mount Rushmore Road
Phone: 343-5383
Owner: Best Hospitality, LLC

Lot 1 in Block 5 of
Highland Park Subdivision
to the City of Rapid City

4A BEST WESTERN TOWN AND COUNTRY
2505 Mount Rushmore Road
Phone: 343-5383
Owner: Best Hospitality, LLC

Lot 2 in Block 1 of
Highland Park Subdivision
to the City of Rapid City

5 COLONIAL HOUSE
2501 Mount Rushmore Road
Phone: 342-4640
Owner: Colonial House Inc.

Lot 1 in Block 1 of
Highland Park Subdivision
to the City of Rapid City

6 HEROES SPORTS CARDS AND GAMES
2425-A Mt Rushmore Rd

DAKOTA PRIDE
2425 Mt Rushmore Rd

BLUE SKY SALON AND DAY SPA
2415-B Mt Rushmore Rd
Owner: Colonial House Inc.

Lot 1 in Block 1 of
Highland Park Subdivision
to the City of Rapid City

7 SUBWAY
2415 Mount Rushmore Road
Phone: 341-0387
Owner: William G. Beshara &
Sandra M. Beshara

Lot 1 of Tract G
to the City of Rapid City

8 MAGNUSON INN
2401 Mount Rushmore Road
Phone: 348-1453
Owner: Galt Investments, LLC

That portion of Tract E to the City of Rapid City,
Beginning at the southeast corner of said Tract E;
thence North 200 feet; thence West 300 feet;
thence South 200 feet; thence East 300 feet
to the point of beginning

9 RAPID CITY MEDICAL CENTER
2820 Mount Rushmore Road
Phone: 342-3280
Owner: Physicians Real Estate, LLP

Tract 3R and Lot 1 of Tract 4R of
Arches Addition to the City of Rapid City

10 TACO BELL
2700 Mount Rushmore Road
Phone: 388-0212
Owner: Lima Properties, LLC

Lot 2 in Tract 4R of Arches Addition
to the City of Rapid City

11 WENDY'S
751 Cathedral Drive
Phone: 343-8557
Owner: Lima Properties, LLC

Lot 2 in Tract 4R of Arches Addition
to the City of Rapid City

12 COMMON CENTS
2660 Mount Rushmore Road
Phone: 343-8003
Owner: Moyle Petroleum Company Inc.

Tract 2 of Arches Addition
of Lot X formerly Lot A
to the City of Rapid City

13 HOLIDAY INN EXPRESS
750 Cathedral Drive
Phone: 341-9300
Owner: RGB Rapid City
Development LLC

Tract 1 of Arches Addition
of Lot X formerly Lot A
to the City of Rapid City

14 BLACK HILLS POWER
Lot C of Lots 11 through 16
in Block 35 of South Boulevard Addition
to the City of Rapid City

15 SINCLAIR
2420 Mount Rushmore Road
Phone: 348-4222
Owner: Myron L. Buchli &
Darlayne M. Buchli

Lots 7 through 12 in
Block 3 of Rainbow Addition
to the City of Rapid City

16 ARBY'S
2400 Mount Rushmore Road
Phone: 348-8605
Owner: James Throp

Lots 1 through 6 in Block 3 of
Rainbow Addition and
Lots 12 through 16 in Block 26 of
South Boulevard Addition
to the City of Rapid City

Prepared By: **ceotec** ENGINEERING SERVICES, INC.
 1560 Concourse Drive
 Rapid City, SD 57703
 Phone: (605) 341-7800
 Fax: (605) 341-7864
 www.ceotecengineering.com

Prepared For: Public Works Department

 Engineering Services

Scale: AS NOTED	Revisions: Number: Description:
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MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION

Sheet Title: PROPERTY	Sheet No: A10
OWNERSHIP	of
INFORMATION	A11

17 **CASA REAL** (now closed)
 2315 Mount Rushmore Road
 Phone: 791-2272
 Owner: Colonial House Inc.

The North 125 feet of Tract E and the North 50 feet of the South 250 feet of Tract E; and the West 200 feet of Tract E; Said Tract E to the City of Rapid City

18 **PERKIN'S**
 2305 Mount Rushmore Road
 Phone: 341-5225
 Owner: Northcott Company

Lots 10 through 18 in Tract C to the City of Rapid City

19 **LAZY U MOTEL**
 2215 Mount Rushmore Road
 Phone: 343-4242
 Owner: Verlyn R. Bourne & Cindy Lou Bourne

The west 130 feet of the north 60 feet and the west 60 feet of the north 105 feet of the south 165 feet and the south 60 feet of Tract D to the City of Rapid City

20 **COYOTE CLAW BARGAINS**
 2209 Mount Rushmore Road
 Phone: 737-4780
 Owner: Jeffrey J. Anderson & Debra G. Anderson

Lot 2 of Tract D to the City of Rapid City

21 **HAPPY JACK'S**
 2201 Mount Rushmore Road
 Phone: 341-5572
 Owner: M.G. Oil Company

Lot 1 of Tract D to the City of Rapid City

22 **SAM & LOUIE'S PIZZA** (now closed)
 2101 Mount Rushmore Road
 Phone: 721-4102
 Owner: BH Hotels, LLC

Lots 12 through 23 in Block 8 of St. Elmo Addition No. 1 to the City of Rapid City

23 **GOLD DIGGERS BLACK HILLS GOLD**
 2017 Mount Rushmore Road
 Phone: 341-9655
 Owner: Cindy's, LLC

Lots 20, 21, 22 and 23 in Block 5 of St. Elmo's Addition No. 1 to the City of Rapid City

24 **PIZZA HUT**
 2005 Mount Rushmore Road
 Phone: 342-1542
 Owner: Gary D. Hermanson

Lots 12, 13, 14, 15, 16, 17, 18 and 19 in Block 5 of St. Elmo Addition No. 1 to the City of Rapid City

25 **MOSTLY CHOCOLATES/POTTERY TO PAINT**
 1919 Mount Rushmore Road
 Phone: 341-2264
 Owner: Dean Kelly & Peggy Kelly

South 10' of Lot 18 and Lots 19, 20, 21, 22 and 23 in Block 2 of St. Elmo Addition No. 1 to the City of Rapid City

26 1909 Mount Rushmore Road
 Owner: Dean Kelly & Peggy Kelly

Lots 16, 17, and North 15' of Lot 18 in Block 2 of St. Elmo Addition No. 1 to the City of Rapid City

27 **MODRICK'S TRAVEL AGENCY**
 803 Saint Patrick Street
 Phone: 342-2700
 Owner: Michael V. Modrick & Lisa A. Modrick

Lots 12 through 15 in Block 2 of St. Elmo Addition No. 1 to the City of Rapid City

28 **STARBUCK'S**
 1819 Mount Rushmore Road
 Phone: 341-3291
 Owner: Green Star Properties, LLC

Lots 27 through 30 in Block 22 of West Boulevard Addition to the City of Rapid City

29 **ADVANCED FAMILY DENTAL**
 1801 Mount Rushmore Road
 Phone: 716-7800
 Owner: Dkota Dawson LLC

LOT 1 in Block 22 of West Boulevard Subdivision to the City of Rapid City

30 **SONIC**
 2316 Mount Rushmore Road
 Phone: 716-3663
 Owner: Rushmore Properties, LLC

Tract A in Block 25 of South Boulevard Addition and Tract 1 in Block 2 of Rainbow Addition to the City of Rapid City

31 **CARPET MART/SIMPLY SLEEP**
 2222 Mount Rushmore Road
 Phone: 348-8900
 Owner: Fischer Family Limited Partnership II, LLLP

Lots 6 through 12 in Block 1 of Rainbow Addition and Lots 17 through 24 in Block 16 of South Boulevard and vacated part of Meade Street abutting Lots 17 through 21 of South Boulevard Addition to the City of Rapid City

32 **RODEWAY INN**
 2208 Mount Rushmore Road
 Phone: 341-5572
 Owner: M.G. Oil Company

Lots 1, 2, 3, 4 and 5 in Block 1 of Rainbow Addition and Lots 1 through 16 and Lots 25 through 32 in Block 16 of South Boulevard Addition to the City of Rapid City

33 **B & T Investments, LLC**
 Lots 6, 7, 8, 9 and 10 in Block 7 of St. Elmo Addition No. 2 together with that portion of the vacated 20 foot wide Alley adjacent to
 Lots 16 and 17 in Block 15 of South Boulevard Addition and
 Lots 5 and 6 in Block 7 of St. Elmo Addition No. 2 and
 Lots 4 through 15 and Lots 17 through 29 and vacated Alley adjacent to Lots 4 through 15 and
 Lots 18 through 29 in Block 15 of South Boulevard Addition to the City of Rapid City

34 **SAFeway**
 2120 Mount Rushmore Road
 Phone: 348-5125
 Owner: Safeway Stores 46, Inc.

Lots 1 through 5 in Block 7 of St. Elmo Addition No. 2 and Lot 16 in Block 15 of South Boulevard Addition to the City of Rapid City

35 **PIONEER BANK AND TRUST**
 2018 Mount Rushmore Road
 Phone: 399-1510
 Owner: Pioneer Bank & Trust

Lots 6, 7, 8, 9 and 10 in Block 6 of St. Elmo Addition No. 2 and Lots 17 and 18 in Block 6 of South Boulevard Addition to the City of Rapid City

36 **RAPID CITY MEDICAL CENTER**
 2006 Mount Rushmore Road
 Phone: 348-2273
 Owner: Black Hills Family Practice Specialists

Lots 1, 2, 3, 4 and 5 in Block 6 of St. Elmo Addition No. 2 and Lots 15 and 16 in Block 6 of South Boulevard Addition to the City of Rapid City

37 **WALGREEN'S**
 1902 Mount Rushmore Road
 Phone: 342-0194
 Owner: Walltrust Properties Inc.

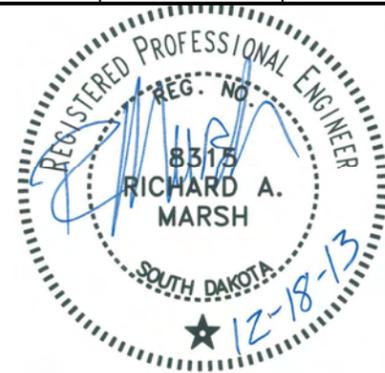
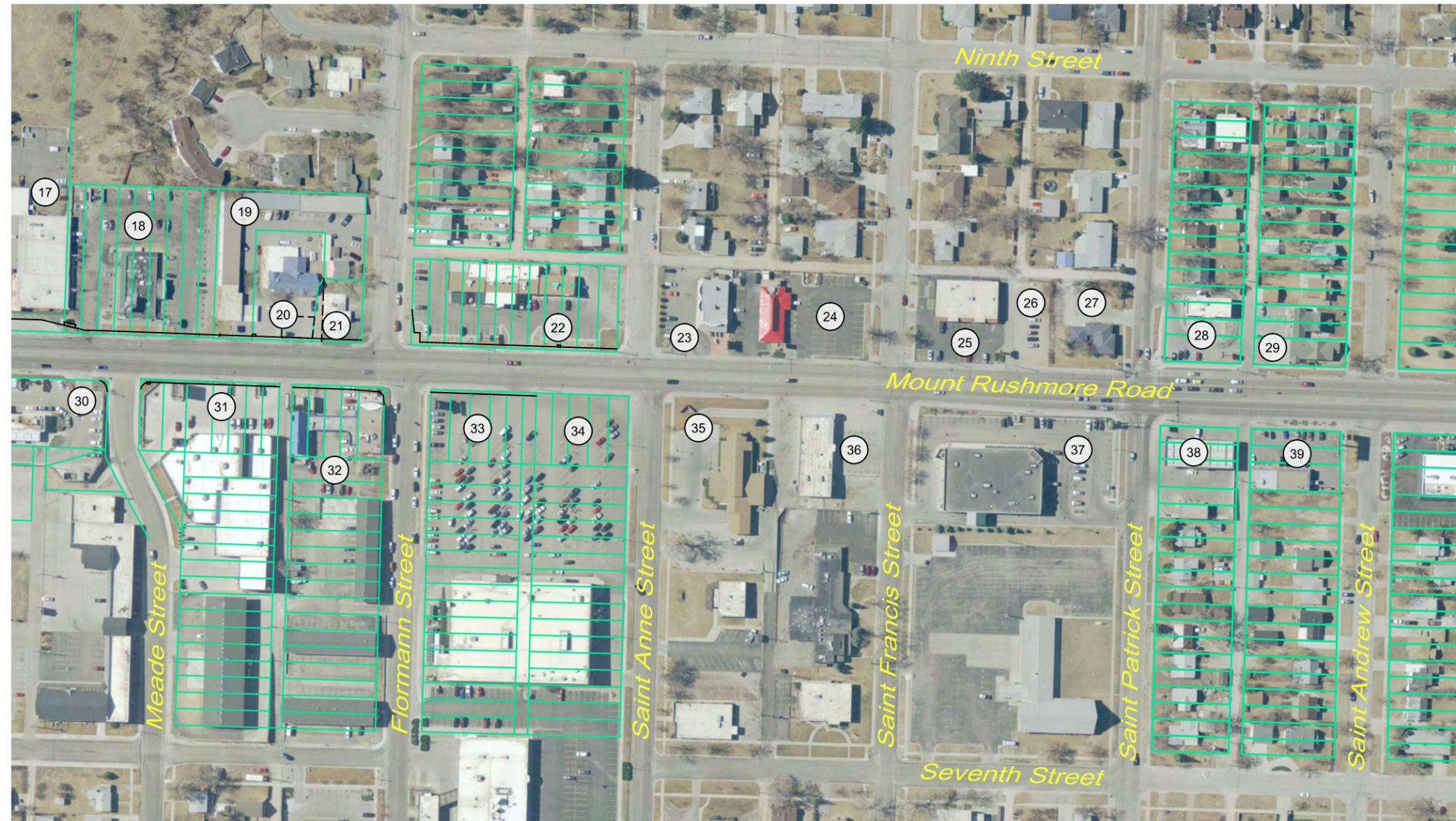
Lots 1 through 10 in Block 1 of St. Elmo Addition No. 2; together with the vacated alley between said Lots 5 and 6 and Lots 14 through 19 in Block 5 of South Boulevard Addition together with the vacated alley between said Lots 14 through 19 to the City of Rapid City

38 **CORNER PANTRY**
 1818 Mount Rushmore Road
 Phone: 342-0730
 Owner: M.G. Oil Company

Lots 4, 5 and 6 in Block 21 of West Boulevard Addition to the City of Rapid City

39 **QUIZNO'S**
 1808 Mount Rushmore Road
 Phone: 343-0053

RUSHMORE CASINO
 1808 Mount Rushmore Road
 Phone: 348-7762
 Owner: McCollam LLC
 LOT 1-3 in Block: 21 of West Boulevard Subdivision



Prepared By:



1560 Concourse Drive
Rapid City, SD 57703
Phone: (605) 341-7800
Fax: (605) 341-7864
www.cetecengineering.com

Prepared For:



Public Works Department
Engineering Services

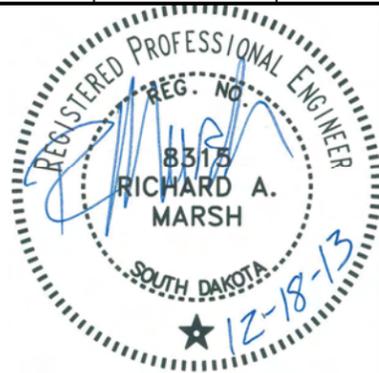
Scale: AS NOTED

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Revisions:	Description:

MOUNT RUSHMORE ROAD UTILITY RECONSTRUCTION

Sheet Title:	Sheet No:
TOPOGRAPHY LEGEND	A11
	of
	A11



TOPO LEGEND

- ▲ CONTROL POINT
- ◻ TEMPORARY CONTROL POINT
- ⊗ R.O.W. MONUMENT
- IRON PIPE
- IRON ROD
- ⊕ POWER POLE
- ⊕ POWER/LIGHT POLE
- ⊕ LIGHT POLE
- GUY POLE
- ⊕ GUY WIRE
- ⊕ TRAFFIC LIGHT
- ⊕ ELECTRIC MANHOLE OR METER
- ⊕ TELEPHONE
- ⊕ TELEPHONE BOX
- ⊕ TELEPHONE MANHOLE
- ⊕ CABLE TV BOX
- ⊕ GAS METER/VALVE
- ⊕ WATER MANHOLE
- ⊕ WELL/TYPE
- ⊕ W.V. WATER VALVE
- ⊕ P.I.V. POST INDICATOR VALVE
- ⊕ C.S. CURB STOP
- ⊕ F.H. FIRE HYDRANT
- ⊕ Y.H. YARD HYDRANT
- ⊕ * SPRINKLER HEAD
- ⊕ WATER METER
- ⊕ CATHODIC TEST STATION
- ⊕ HOSEBIB
- ⊕ S SANITARY MANHOLE
- ⊕ C.C.O. SEWER CLEAN OUT
- ⊕ SEPTIC TANK
- WOOD OR STEEL POST
- ⊕ VENT
- ⊕ STUMP
- ⊕ BUSH
- ⊕ DECIDUOUS TREE
- ⊕ CONIFEROUS TREE
- ⊕ S STORM SEWER MANHOLE
- ⊕ STORM INLET
- ⊕ SINGLE POST SIGN OR PARK METER
- ⊕ MULTI POST SIGN
- ⊕ DELINEATOR
- BRIDGE COLUMN

- ⊕ RAILROAD SIGNAL
- BOLLARD
- ⊕ B.H.# BOREHOLE OR TESTHOLE
- ⊕ UNKNOWN MANHOLE
- COLUMN
- ⊕ M.B. MAILBOX
- ▭ BUILDING
- ▭ CONCRETE
- ▭ GUARDRAIL
- ▭ RAILROAD
- S— SANITARY SEWER
- W— WATER LINE
- X" SS— STORM SEWER
- X—X—X— BARBED WIRE FENCE
- /—/—/— CHAIN LINK FENCE
- WOOD FENCE
- =— WOVEN WIRE FENCE
- OHP— OVERHEAD POWER
- OHC— OVERHEAD CABLE TV
- OHT— OVERHEAD TELEPHONE
- TV— UG CABLE TV (UNKNOWN)
- UGE— UNDERGROUND ELECTRIC (UNKNOWN)
- UGT— UNDERGROUND TELEPHONE (UNKNOWN)
- FO— FIBER OPTIC
- G— GAS LINE (UNKNOWN)
- KNB— KANEB PIPELINE
- MDU— MONTANA DAKOTA UTILITIES
- WBI— WILLISTON BASIN INTERSTATE PIPELINE
- BEC— BUTTE ELECTRIC UG
- BHE— BLACK HILLS ELEC UG
- BHP— BLACK HILLS POWER UG
- GWT— GOLDEN WEST
- KNO— KNOLOGY COMMUNICATIONS
- MIDCO— MIDCONTINENT COMMUNICATIONS
- MRT— MOUNT RUSHMORE TELEPHONE
- CLNK— CENTURY LINK COMMUNICATIONS
- WRE— WEST RIVER ELEC UG
- ACP— ASBESTOS CEMENT PIPE
- CIP— CAST IRON PIPE
- CMP— CORRUGATED METAL PIPE
- DIP— DUCTILE IRON PIPE
- FRP— FIBERGLASS REINFORCED PIPE
- HDPE— HIGH DENSITY POLYETHYLENE PIPE
- PVC— POLYVINYL CHLORIDE PIPE
- RCP— REINFORCED CONCRETE PIPE
- VCP— VITRIFIED CLAY PIPE

PROPOSED WATER AND SEWER LEGEND

- ⊕ 11 1/4" BEND
- ⊕ 22 1/2" BEND
- ⊕ 45° BEND
- ⊕ 90° BEND
- ⊕ CAP OR PLUG
- ⊕ COUPLING
- ⊕ VERTICAL BEND
- ⊕ CROSS
- ⊕ CURB STOP
- ⊕ GATE VALVE
- ⊕ FIRE HYDRANT
- ⊕ REDUCER/INCREASER
- ⊕ TEE
- ⊕ THRUSTBLOCK
- ⊕ CATHODIC TEST STATION
- ⊕ CLEANOUT
- ⊕ MANHOLE
- ⊕ SANITARY SEWER LINE
- ⊕ WATER LINE
- ⊕ JOINT RESTRAINING LENGTH