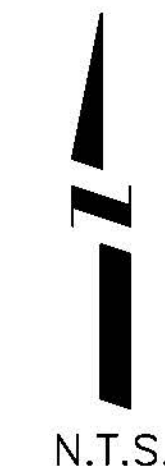
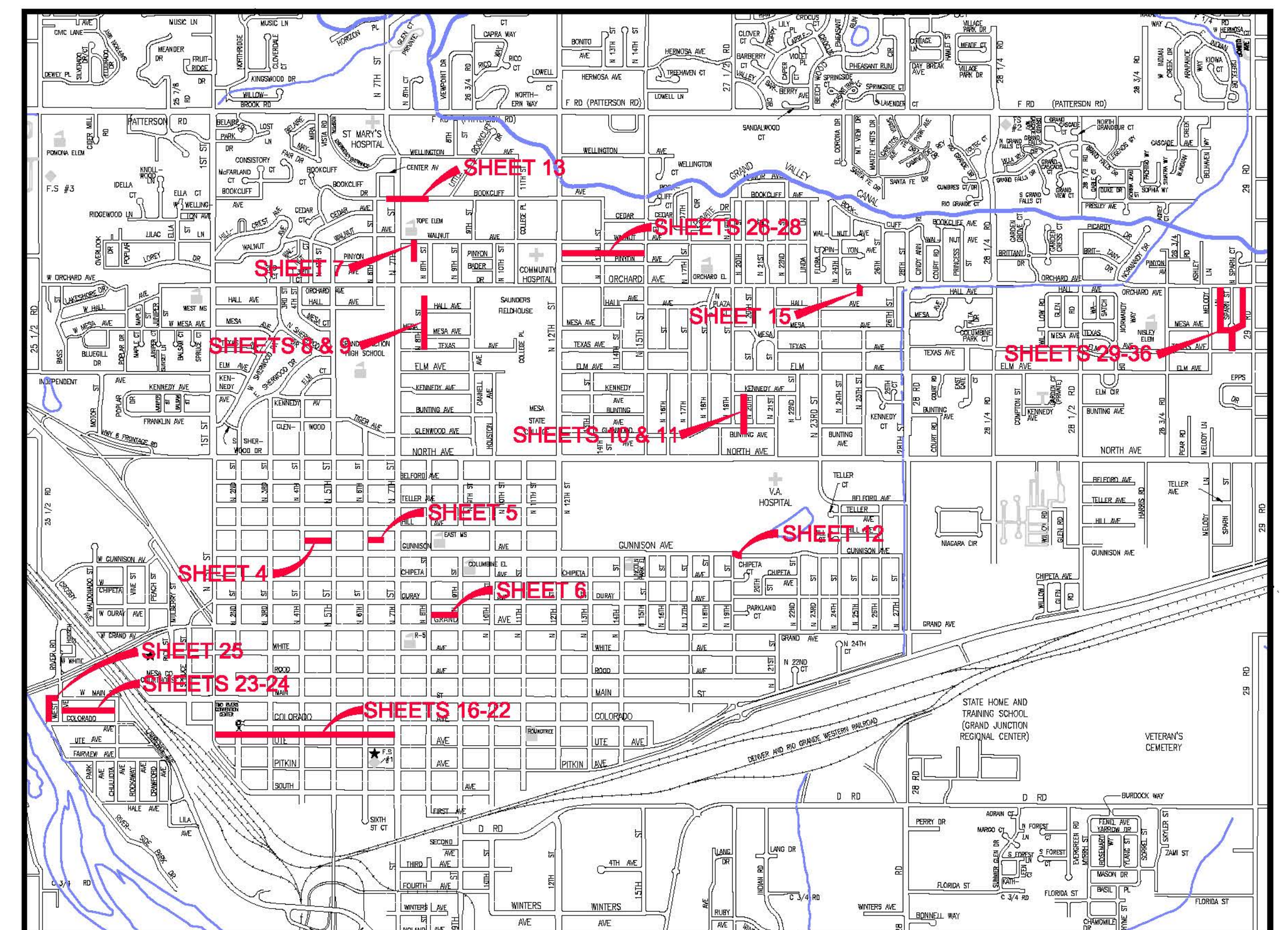
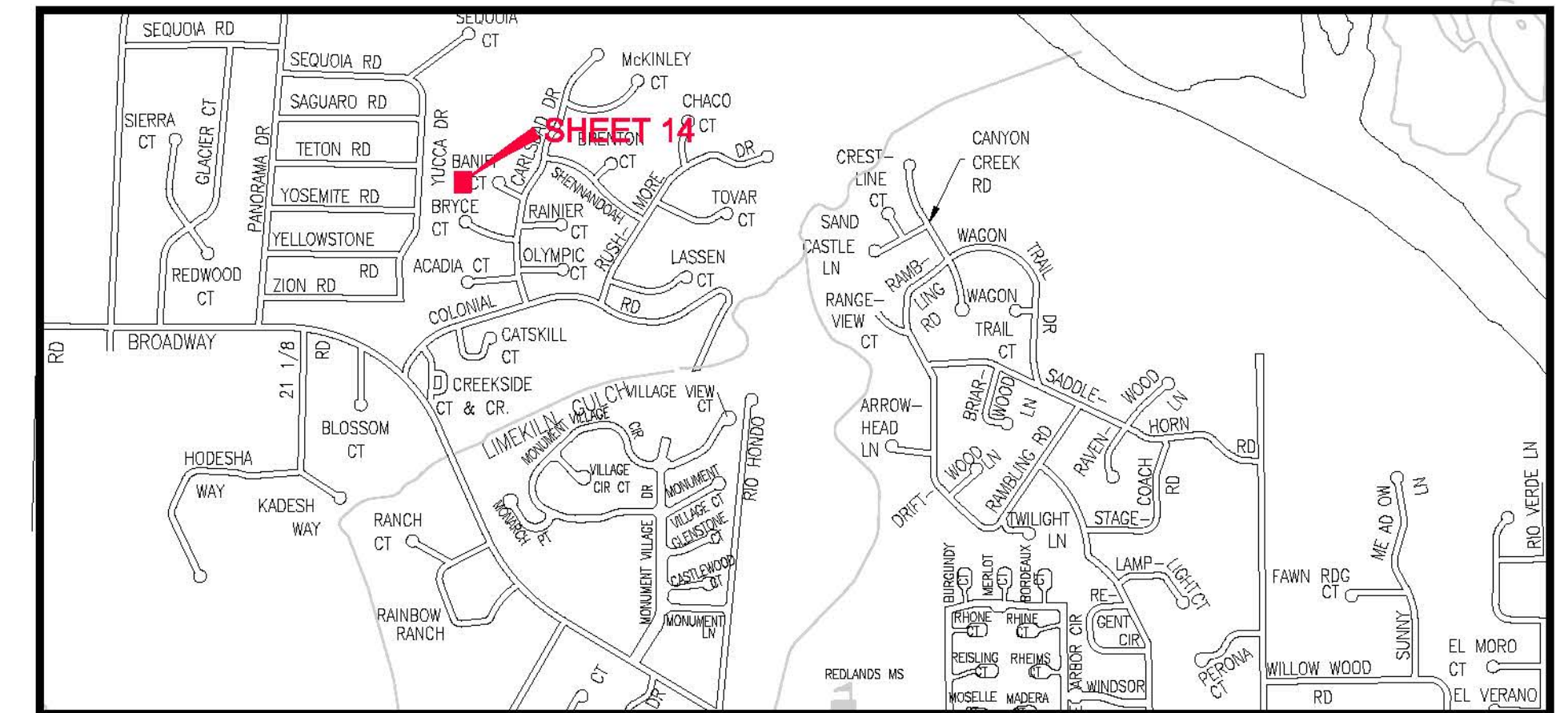


# 2009 SANITARY SEWER REPLACEMENTS

## FEBRUARY, 2009

VICINITY MAPS



- 1 — Cover Sheet
- 2 — Standard Abbreviations, Legend, and Symbols
- 3 — Summary of Approximate Quantities
- 4 — Hawthorne Park
- 5 — Alley @ 6th St. between Gunnison Ave. and Hill Ave.
- 6 — Alley 8th St. - 9th St. / Ouray Ave. and Grand Ave.
- 7 — Alley @ Walnut Ave. between 7th St. and 8th St.
- 8-9 — 8th Street North of Hall Ave. to Texas Ave.
- 10-11 — Alley Kennedy Ave. to Bunting Ave. / 19th St. and 20th St.
- 12 — 19th and Gunnison Ave.
- 13 — 7th Street and Bookcliff Avenue
- 14 — 619 Acadia Drive Sewer Service
- 15 — 2437 Orchard Avenue Storm Sewer
- 16-22 — Alley between Colorado Ave. & Ute Ave. from 1st Street to 7th Street
- 23-24 — Alley between W. Main St. & W. Colorado Ave. from West Ave. to Chuluota Ave.
- 25 — Alley West of West Ave. from W. Main St to W. Colorado Ave.
- 26-28 — Alley between Walnut Ave. & Pinyon Ave. from 12th St. to 15th St.
- 29-34 — Lines East, West and South of Sparn Court
- 34-35 — Sparn Court Storm Sewer
- 36 — Storm Water Management Plan

UTILITIES AND AGENCIES

AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX
GRAND JUNCTION, CITY OF	DAVID DONOHUE	PROJECT ENGINEER	PROJECT ENGINEER	250 N. 5th STREET	250 N. 5th STREET	GRAND JCT., CO 81501	(970) 244-1558	(970) 256-4022
GRAND JUNCTION, CITY OF	BRET GUILLORY	UTILITY ENGINEER	SANITARY SEWER	250 N. 5th STREET	250 N. 5th STREET	GRAND JCT., CO 81501	(970) 244-1590	(970) 256-4022
BRESNAN	CHUCK WEIDMAN	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8750	(970) 245-6803
QWEST	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE.	2524 BLICHMANN AVE.	GRAND JCT., CO 81504	(970) 244-4311	(970) 240-4349
UTE WATER	DARYL MOORE	SUPERVISOR	WATER	PO BOX 460		GRAND JCT., CO 81502	(970) 242-7491	(970) 242-9189
XCEL	DAN STEINKIRCHNER	UNIT MANAGER	GAS, ELECTRIC	2538 BLICHMANN AVE.	2538 BLICHMANN AVE.	GRAND JCT., CO 81504	(970) 244-2656	(970) 244-2661

**AS BUILT 03/2010**



## Public Works & Utilities Engineering Division

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE COVER SHEET WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

REVISION	DESCRIPTION	DATE
REVISION A		
REVISION B		
REVISION C		
REVISION D		

<b>DRAWING STATUS:</b>	
○	PROGRESS
◐	FINAL CONSTRUCTION DRAWINGS
●	ASBUILT
<b>DESIGNED BY:</b>	
DAVID DONOHUE, PROJECT ENGINEER	DATE
<b>REVIEWED BY:</b>	
BRET GUILLORY, UTILITY ENGINEER	DATE
<b>AUTHORIZED FOR CONSTRUCTION</b>	
TRENTON C. PRALL, CITY ENGINEER	DATE
<b>ACCEPTED AS CONSTRUCTED</b>	
DAVID DONOHUE, PROJECT ENGINEER	DATE

2009 SEWER REPLACEMENTS, FEBRUARY, 2009, Plan Set No. 1

**ABBREVIATIONS**

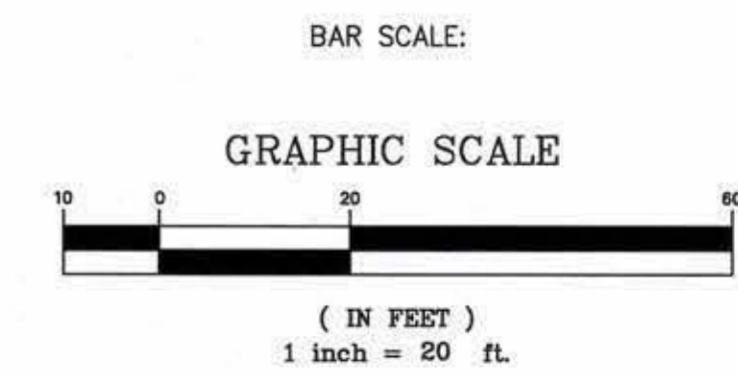
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C,G,& SW	CURB, GUTTER & SIDEWALK
CL	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSP	CORRUGATED STEEL PIPE
CU	COPPER
DJ	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
E	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPRC	VERTICAL POINT OF COMPOUND CURVATURE
VPR	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
Δ	DELTA ANGLE

**LEGEND**

BSWMP DRAINAGE BASIN BOUNDARY	
BSWMP ANCHORED STRAW BALES	
BSWMP SILT FENCE	
BUILDING	
CONCRETE CURB AND GUTTER	
CONCRETE CURB, GUTTER, & SIDEWALK	
CONCRETE DITCH	
CONCRETE SIDEWALK	
CULVERT	
EARTH DITCH	
EDGE OF GRAVEL	
EDGE OF PAVEMENT	
FENCE (BARBED WIRE)	
FENCE (CHAIN LINK)	
FENCE (IRON)	
FENCE (PLASTIC)	
FENCE (TEMPORARY CONSTRUCTION)	
FENCE (WOOD)	
FENCE (WOVEN WIRE)	
GUARD RAIL	
HATCHING: INDICATES ASPHALT REMOVAL	
HATCHING: INDICATES CONCRETE REMOVAL	
HATCHING: INDICATES STAGING AREA	
LINE (CENTER OF IMPROVEMENTS)	
LINE (CITY LIMITS)	
LINE (CONTROL)	
LINE (EASEMENT)	
LINE (MONUMENT/SECTION)	
LINE (PROPERTY)	
LINE (RIGHT OF WAY)	
MATCH LINE	
PIPE (IRRIGATION)	
PIPE (SIPHON)	
PROPOSED CONCRETE CURB AND GUTTER	
PROPOSED CONCRETE CURB, GUTTER, & SIDEWALK	
PROPOSED CONCRETE SIDEWALK	
PROPOSED \"WET\" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN)	
ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE	
RAIL ROAD	
RETAINING WALL	
STRIPING (CONTINUOUS WHITE)	
STRIPING (DASHED WHITE)	
STRIPING (CONTINUOUS YELLOW)	
STRIPING (DASHED YELLOW)	
TOP OF SLOPE	
CONTOUR LINES (SHOWN BETWEEN TOP & TOE)	
TOE OF SLOPE	
TRAFFIC DETECTOR LOOP	
UTILITY LINE (ABANDON) (THIS CASE A WATER LINE)	
UTILITY LINE (CABLE TV)	
UTILITY LINE (ELECTRIC)	
UTILITY LINE (FIBER OPTIC)	
UTILITY LINE (GAS)	
UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER)	
UTILITY LINE (OVERHEAD POWER)	
UTILITY LINE (OVERHEAD TELEPHONE)	
UTILITY LINE (SANITARY SEWER)	
UTILITY LINE (SANITARY SEWER FORCE MAIN)	
UTILITY LINE (SANITARY SEWER SERVICE)	
UTILITY LINE (STORM SEWER)	
UTILITY LINE (STORM SEWER, PERFORATED)	
UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION)	
UTILITY LINE (TELEPHONE)	
UTILITY LINE (WATER)	

**SYMBOLS**

BENCH MARK	
CATCH BASIN	
CLEAN OUT	
CURB STOP	
FIRE HYDRANT	
GUY WIRE ANCHOR	
HEADGATE	
IRRIGATION PUMP	
MAILBOX	
MANHOLE (ELECTRIC)	
MANHOLE (GAS)	
MANHOLE (SANITARY/STORM)	
MANHOLE (TELEPHONE)	
MANHOLE (TV)	
MANHOLE (WATER)	
METER (GAS)	
METER (WATER)	
PEDESTAL (TELEPHONE)	
PEDESTAL (TV)	
PROPERTY PIN	
PULL BOX	
REDUCER FITTING	
SIGN OR POST (SIGN TYPE NOTED)	
SPRINKLER HEAD	
STREET LIGHT	
SURVEY MONUMENT (CITY)	
SURVEY MONUMENT (TYPE NOTED)	
TEST HOLE	
TRAFFIC PAINT MARKING	
TRAFFIC SIGNAL POLE AND MAST ARM	
UTILITY POLE	
VALVE (GAS)	
VALVE (IRRIGATION)	
VALVE (WATER)	
VEGETATION (HEDGE OR BUSH)	
VEGETATION (TREE STUMP)	
VEGETATION (TREE) (CALIPER SIZE NOTED)	
WATER HYDRANT	
WEIR	
YARD LIGHT	



NORTH ARROW:



REVISION	DESCRIPTION	DATE

DRAWN BY	JCS	DATE	4-02
DESIGNED BY		DATE	
CHECKED BY		DATE	
APPROVED BY		DATE	

SCALE	
PLAN	PROFILE
HORIZ. 1"=20'	HORIZ.
	VERT.



**PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION**

**CITY OF GRAND JUNCTION STANDARD ABBREVIATIONS, LEGEND, AND SYMBOLS SHEET**

Item No.	CDOT City Ref.	Description	Quantity	Units
1	202	REMOVAL OF ASPHALT MAT. CUT AND REMOVE AS SHOWN.	4,019.	SY
3	202	REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.	500.	SY
4	202	REMOVAL OF TREE (SIZE AS SHOWN ON PLAN)	1.	EA
5	202	REMOVAL OF BUSH.	4.	EA
16	202	REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.	19.	EA
24	210	RESET LANDSCAPE APPURTENANCE.	5.	EA
101	210	RESET SPRINKLER SYSTEM, AS NEEDED (COMPLETE IN PLACE)	1.	LS
102	210	RESET FENCE AND GATE AS REQUIRED. (HEIGHT AND MATERIAL AS SHOWN ON PLAN)	138.	LF
129	210	RESET IRRIGATION PUMP. INCLUDES RESET AND RECONNECTION OF PIPE, FITTINGS, PUMP, ELECTRICAL, SHELTER, AND ANY/ALL MOUNTING PANELS.	4.	EA
200	102.11/1 08.5	STORM SEWER BASIC MANHOLE (48" I.D.) INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03)	1.	EA
200B	102.11/1 08.5	STORM SEWER BASIC MANHOLE (36" I.D.), INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES VIA CORING AND GROUTING AND ADJUSTING TO FINAL GRADE.	1.	EA
200C	102.11/1 08.5	STORM SEWER BASIC MANHOLE (24" I.D.) INCLUDES CONNECTION OF ADJACENT STORM SEWER LINE VIA CORING AND GROUTING, CONNECTING TO UNDERLYING STORM SEWER MAIN AS PER CONSTRUCTION DRAWING DETAIL, AND ADJUSTING TO FINAL GRADE.	1.	EA
204	102.13/1 08.6	SINGLE STORM DRAIN INLET (VERTICAL CURB) (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-07). INCLUDES CONNECTING LATERAL VIA CORING AND GROUTING THROUGH CORNER OF CATCH BASIN BOX.	1.	EA
215	102.10/1 08.2	6" STORM DRAIN PIPE (C-900 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.	140.	LF
218	102.10/1 08.2	12-INCH STORM DRAIN PIPE (PVC, SDR-35) INCLUDES CALDER/FERNO COUPLINGS AT TIE-IN ENDS). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS IF ACCEPTABLE OR IMPORTED BACKFILL MEETING 103.16.	40.	LF
253	102.14	CONNECT NEW 6" C-900 PVC STORM TO EXISTING 60" STORM	1.	EA
254	102.14	GROUT-SEAL HOLE OPENING IN MAHOLE, CATCH BASIN, OR PIPE STUB; DIA. 18 INCHES OR LESS.	9.	EA
269A	UU/108.2	BYPASS PUMPING FOR ALL OPERATIONS ON SEWER IMPROVEMENTS IN COLORADO AVE./UTE AVE. ALLEY. BYPASS CONFIGURATION SHALL ALLOW CONTINUOUS TRAFFIC USAGE OF AFFECTED STREETS. CONTRACTOR SHALL INDEPENDENTLY VERIFY FLOW RATES.	1.	LS
269B	UU/108.2	BYPASS PUMPING FOR ALL OPERATIONS IMPACTING 2897 ORCHARD AVENUE. INCLUDES SERVICE ENTERING MANHOLE E2-282-060 AND SERVICE LOCATED 23 FT SOUTH OF MANHOLE AND ANY AND ALL OTHER SERVICES NOT PREVIOUSLY LOCATED ASSOCIATED WITH THIS ADDRESS. SANITARY SERVICE	1.	LS
269C	UU/108.2	BYPASS PUMPING FOR ALL OPERATIONS IMPACTING MANHOLE REMOVAL AND REPLACEMENT AT 19TH STREET AND GUNNISON AVE. CONTRACTOR SHALL INDEPENDENTLY VERIFY FLOW RATES.	1.	LS
270	UU/108	REMOVE AND REPAIR IRRIGATION LATERAL MAIN. SIZE VARIES (4 -12 INCHES). INCLUDES CUTTING AND REMOVAL OF CONFLICTING PIPE SECTION, SECURING OF WATER FLOWS, INSTALLATION OF REPAIR SECTION INCLUDING COUPLING(S), AND BEDDING, HAUNCHING, AND BACKFILL OF PIPE A.	8.	EA
300	102.11/1 08.5	SANITARY SEWER BASIC MANHOLE (48" I.D.) (DEPTH ≤ 5'). INCLUDES CONNECTION OF ADJACENT SEWER LINES (INCLUDING PIPE STUB LENGTHS AND COUPLINGS), FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02)	19.	EA
300B	102.11/1 08.5	SANITARY SEWER BASIC MANHOLE (60" I.D.) (DEPTH AS SHOWN ON PLANS). INCLUDES CONNECTION OF ADJACENT SEWER LINES (INCLUDING PIPE STUB LENGTHS AND COUPLINGS), FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02)	1.	EA
306	102.11/1 08.5	MANHOLE BARREL SECTION (DEPTH=5')/DIA. = 48"). INCLUDES STORM SEWER AND SANITARY SEWER MAHNOLE BARREL SECTIONS.	45.	VLF
310	102.11/1 08.5	CONNECT TO EXISTING INLET (6" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06)	3.	EA
311	102.11/1 08.5	CONNECT TO EXISTING MANHOLE (4", 6" OR 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08). CONTRACTOR SHALL CONNECT THE SEWER PIPE TO THE EXISTING MANHOLE IN SUCH A WAY THAT ENSURES A WATERTIGHT CONNECTION. CONTRACTOR SHALL RECONSTRUCT MH	25.	EA
321	102.9/10 8.2	4" GRAVITY SEWER PIPE (SDR 35 PVC) INCLUDES CONNECTION TO EXISTING/NEW LINE/TAP. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR A	1,384.	LF
329	102.9/10 8.2	8" GRAVITY SEWER PIPE (ASTM D-3034 SDR-35 PVC) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.	6,100.	LF
328A	102.9/10 8.2	6" GRAVITY SEWER PIPE (ASTM D-3034 SDR-35 PVC) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.	2,300.	LF
329B	102.108 2	8-INCH CURED IN PLACE PIPE (CIPP). DESIGNED, SUBMITTED, AND STAMPED BY P.E.; INSTALLED BY CONTRACTOR OR SUBCONTRACTOR MEETING SPECIFICATIONS DEFINED IN CONTRACT DOCUMENTS. SEE SPECIAL PROVISIONS. DESIGN SHALL BE FOR EXISTING PIPE IN FULLY DETERIORATED CO	2,576.	LF
347	102.9/10 4.2/108.2	8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT	105.	EA
347A	102.9/10 4.2/108.2	6" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT	70.	EA
347B	102.9/10 4.2/108.2	6" x 4" SEWER SERVICE TAP (NEW SERVICE ON EXISTING PIPE UNDERGOING TRENCHLESS REPAIR), TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP. NEW TAP SHALL BE (W/ APPROVAL OF ENGINEER OR INSPECTOR ON CASE-SPECIFIC BASIS); FULL BODY W	1.	EA
347C	102.9/10 4.2/108.2	8" x 4" SEWER SERVICE TAP. NEW SERVICE ON EXISTING SHALLOW PIPE (DEPTH 6" OR LESS) UNDERGOING TRENCHLESS REPAIR, TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP AFTER TRENCHLESS REHAB (NEW TAP SHALL BE INSERTA-TEE). ALL BEN	11.	EA

347D	102.9/10 4.2/108.2	CIPP TRENCHLESS SANITARY SEWER SERVICE CONNECTION (TOPHAT); 4" DIA SERVICE; MAIN DIA. VARIES.	22.	EA
347E	102.9/10 4.2/108.2	8" x 4" SEWER SERVICE TAP. NEW SERVICE ON EXISTING DEEP PIPE (DEPTH GREATER THAN 6 FEET) UNDERGOING TRENCHLESS REPAIR, TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP PRIOR TO CIPP INSTALLATION. NEW TAP SHALL BE (W/ APPROVAL O	12.	EA
356	104.4	ENCASE SEWER PIPE IN REINFORCED CONCRETE PER STD. DETAIL GU-04.	20.	LF
360	206	STRUCTURE BACKFILL (FLOWFILL). USE FOR BACKFILL BENEATH WATER, STORM, IRR LINES; EXTEND 5 FT EITHER SIDE OF UPPER UTILITY.	150.	CY
361	103.16/10 8.2	IMPORTED TRENCH BACKFILL (PIT RUN). INCLUDES DISPOSAL OF UNSUITABLE AND/OR EXCESS MATERIAL AT DISPOSAL SITE PROCURED BY CONTRACTOR.	7,000.	TON
362	103.15/1 08.7	OVEREXCAVATION AND GRANULAR STABILIZATION MATERIAL (TYPE B).	2,000.	TON
364	104.2	INSTALL SANITARY SEWER CLEANOUT, CLEANOUT RING & COVER AND CONCRETE COLLAR (SS-07). INCLUDES CONNECTING TO EXISTING PIPE.	1.	EA
364A	104.2	INSTALL STORM SEWER CLEANOUT, CLEANOUT RING & COVER AND CONCRETE COLLAR (SS-07).	1.	EA
366	103	EXCAVATE LAUNCHING/RECEIVING PIT FOR HDD, IMPACTOR DEVICE, HDPE ADAPTER AND HDPE PIPE. BACK FILL TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACK FILL MATERIAL, AS DETERMINED OR AGREED TO BY ENGINEER. COST OF BACKFILL IS INCI	3.	EA
367	102.9/10 8.2	INSTALL NEW 6" HIGH DENSITY POLYETHYLENE (HDPE) SDR-17 SEWER PIPE FOR PIPE BURSTING. ANY/ALL ADAPTER PIPE SEGMENTS AND FITTINGS AT ENDS REQUIRED FOR CONNECTION TO MANHOLES SHALL BE INCIDENTAL TO THIS PAY ITEM.	658.	LF
367B	102.9/10 8.2	TRENCHLESS INSTALLATION OF NEW 8" SANITARY SEWER IN FULLY DETERIORATED 8" VCP. P.E.-DESIGNED 8" CIPP OR HIGH DENSITY POLYETHYLENE (HDPE) SDR-17 (ASTM F714, D3550, AND D3035) INSTALLED VIA PIPE BURSTING. LAUNCHING/RECEIVING PITS INCIDENTAL.	642.	LF
368	102.11/1 02.14/10 8.2	RECONDITION EXISTING MANHOLE BENCH. REMOVE DETERIORATED CONCRETE ON BENCH AND AROUND BASE USING ACID ETCH OR CHIPHAMMERING; CLEAN AND REMOVE DEBRIS; SATURATE SURFACE WITH ACRYLIC FORTIFIER; ADD ZYPEX C-500 TO GROUT (GROUT MIX AS PER UJ SPECS.) AT 3% PER W	14.	EA
369	104/108 5	ABANDON 4" DIA. MANHOLE; REMOVE CONE; RING AND COVER TO CITY SHOPS; FILL BASE W/ 1 FT CLASS B CONCRETE, THEN COMPACTED PIT RUN TO SUBGRADE. ALL WORK EXCEPT ROAD BASE AND ASPHALT PATCH PAID FOR UNDER THIS PAY ITEM.	5.	EA
371	608.06	CONNECT CLEANOUT TO EXISTING 4" SANITARY SEWER.	1.	EA
555	608.06	CONCRETE SIDEWALK (4" THICK)	20.	SY
555A	608.06	CONCRETE SIDEWALK (8" THICK)	15.	SY
563	608.06	MONOLITHIC DRIVE OVER CURB, GUTTER AND SIDEWALK (MATCH EXISTING)(8" THICK)	20.	SY
569	608.06	MONOLITHIC VERTICAL CURB, GUTTER AND SIDEWALK (MATCH EXISTING)	25.	SY
576	608.06	CONCRETE DRIVEWAY SECTION (8" THICK) (COMMERCIAL)	30.	SY
577	608.06	CONCRETE DRIVEWAY SECTION (6" THICK) (RESIDENTIAL)	35.	SY
581	608.06	CONCRETE DRAINAGE PAN (6" WIDE)	16.	LF
584	608.06	CONCRETE DRAINAGE PAN (2.5' WIDE)	8.	LF
602	608.06	CONCRETE CURB AND GUTTER (2' WIDE)	60.	LF
603	608.06	CONCRETE CURB AND GUTTER (1'-6" WIDE)	225.	LF
604	608	CONCRETE CURB RAMP	8.	SY
605	608	DETECTABLE WARNING (SURFACE APPLIED OR WET SET)	8.	SF
606	608	CONCRETE CURB (6" WIDE, 18" TOTAL HT.)	40.	LF
636	608.06	CONCRETE PAVEMENT PATCH, 8" THICK, 6" CLASS 6 A.B.C., INCLUDES DOWELS AS PER STD. DETAIL IN STD. CONTRACT DOCUMENTS.	250.	SY
663	304	AGGREGATE BASE COURSE (CLASS 6) (6" THICK)	4,150.	SY
671	304	WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. MATCH EXISTING TYPE. THICKNESS IS 2" MIN. AND 3" MAX	160.	SY
672	304	AGGREGATE BASE COURSE (CLASS 6) (4" THICK)	1,900.	SY
681	401.08	HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22); TWO 1.5-INCH LIFTS; INSTALLATION AND LIFT THICKNESSES SHALL CONFORM TO STANDARD CONTRACT DOCUMENT SPECIFICATIONS.	4,000.	SY
681B	401.08	HOT BITUMINOUS PAVEMENT (PATCHING) (6" THICK) (GRADING SX, BINDER GRADE PG 64-22); ONE 3-INCH LIFT, ONE 2-INCH LIFT	550.	SY
681C	401.08	T-TOP PAVEMENT PATCHING: MIL/PLANE 2" DEEPX2' WIDE PERIMETER AROUND ASPHALT PATCH AREA, PLACE 2" LIFT HOT BITUMINOUS PAVEMENT (GRADING AND GRADE TO MATCH PATCH SPEC.) LIFT, INTERGRAL W/ FINAL 2" LIFT OF PATCHING HBP.	200.	SY
730	212	RESOD AREA AS SHOWN. INCLUDES STOCKPILE AND REUSE OF 12" OF EXISTING TOPSOIL (MUST BE KEPT FREE OF DETRITUS AND APPROVED BY INSPECTOR OR ENGINEER), OR IMPORT OF 12" OF NEW TOPSOIL, APPROVED BY INSPECTOR OR ENGINEER.	2,400.	SY
731	207	STOCKPILE AND RESET TOP 12 INCHES OF TOPSOIL OR IMPORT NEW FROM SOURCE APPROVED BY ENGINEER. KEEP FREE FROM DEBRIS. PLACE AT 90% MAX DENSITY WITH TOP 3" LOOSEENED FOR SEED BED.	1,000.	SY
900	208/108 12	DUST ABATEMENT	60.	DAYS
901	620	PORTABLE SANITARY FACILITIES (MULTIPLE LOCATIONS NOT PAID SEPARATELY)	60.	DAYS
902	625	CONSTRUCTION SURVEYING, INCLUDING AS-BUILT DRAWINGS	1.	LS
902A	629	REFERENCE AND RESET SURVEY MONUMENT (PROPERTY PINS TO BE REFERENCED AND RESET AS INCIDENTAL ITEM)	5.	EA
903	626	MOBILIZATION	1.	LS
904	630	TRAFFIC CONTROL PLAN	1.	LS
905	630	TRAFFIC CONTROL (COMPLETE IN PLACE)	1.	LS
906	630	TRAFFIC CONTROL FLAGGING HOURS	220.	HRS
907	208	STORMWATER MANAGEMENT PLAN IMPLEMENTATION	1.	LS
908	GCC56	WEEKLY NEWSLETTERS (APPROXIMATELY 1000) PER DISTRIBUTION	1.	LS
MCR		Minor Contract Revisions	---	---

REVISION $\Delta$	DESCRIPTION	DATE	DRAWN BY JAH	DATE 2/2009	SCALE
REVISION $\Delta$			DESIGNED BY	DATE	N.T.S.
REVISION $\Delta$			CHECKED BY	DATE	
REVISION $\Delta$			APPROVED BY	DATE	



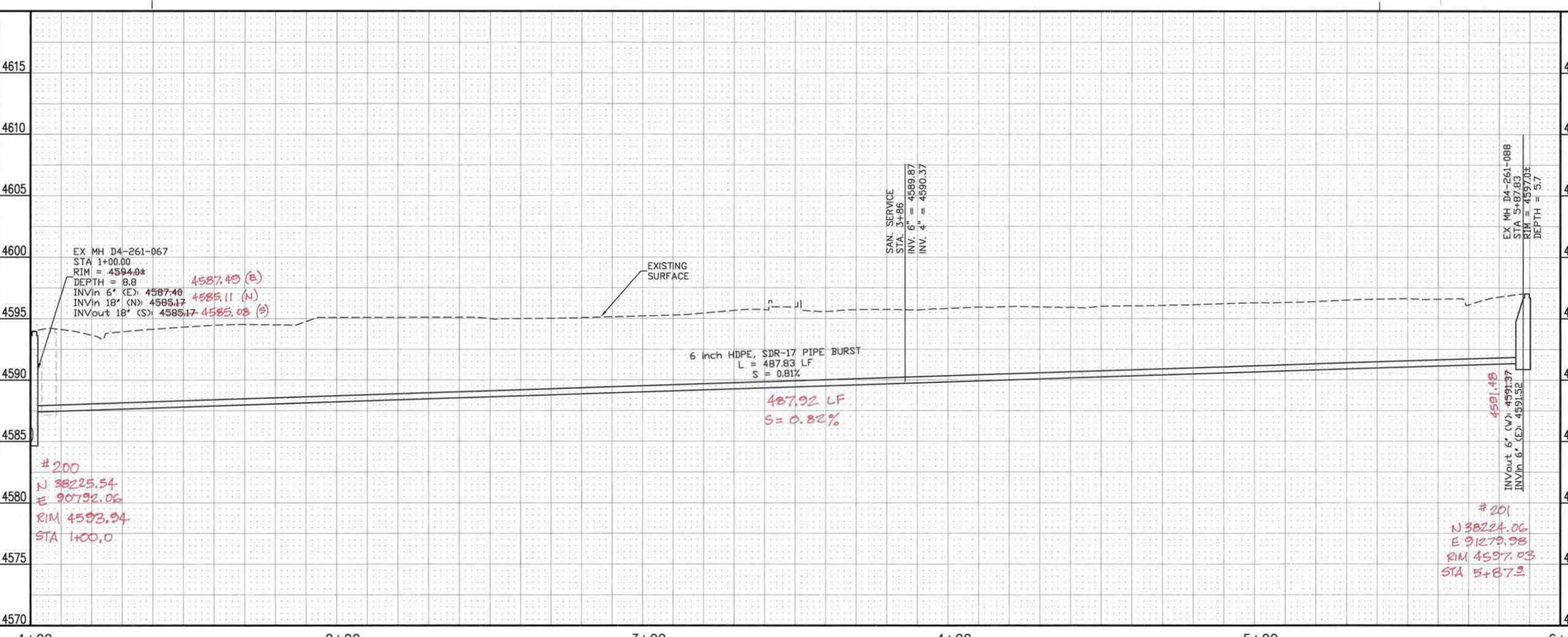
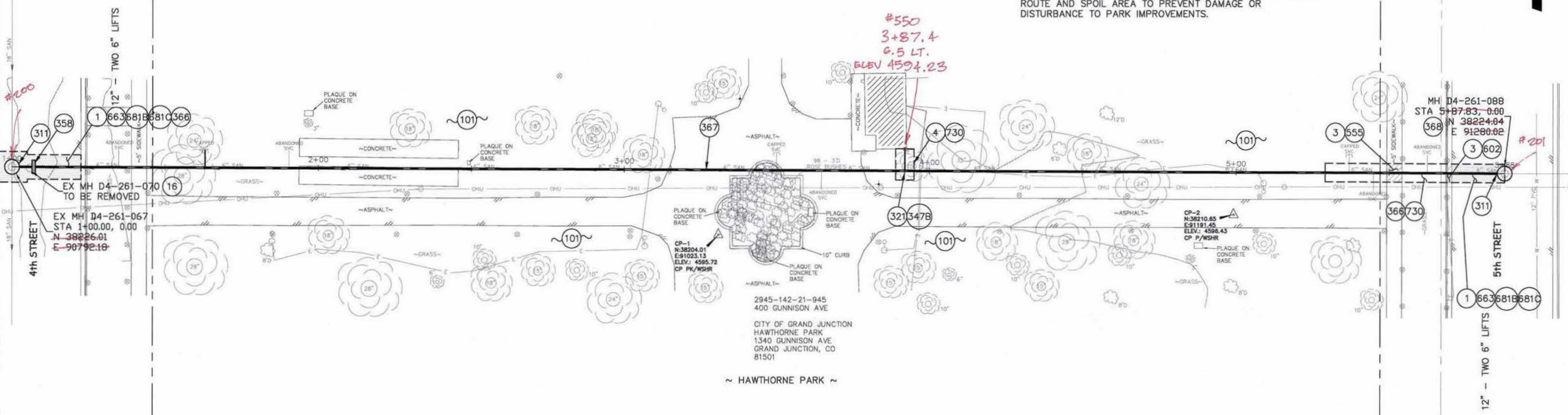
**PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION**

**2009 SEWER REPLACEMENTS SUMMARY OF APPROXIMATE QUANTITIES**

CONSTRUCTION NOTES

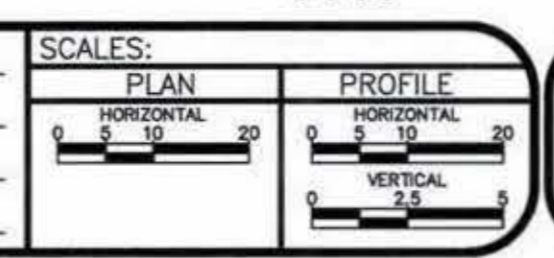
- 1 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 4 202 - REMOVAL OF TREE (SIZE AS SHOWN ON PLAN)
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 101 210 - RESET SPRINKLER SYSTEM, AS NEEDED (COMPLETE IN PLACE)
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE (6" OR 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08). CONTRACTOR SHALL CONNECT THE SEWER PIPE TO THE EXISTING MANHOLE IN SUCH A WAY THAT ENSURES A WATERTIGHT CONNECTION. CONTRACTOR SHALL RECONSTRUCT MH INVERT, COST SHALL BE INCIDENTAL TO THE COST OF "CONNECT TO EXISTING MANHOLE" BID ITEM.
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES CONNECTION TO EXISTING/NEW LINE/TAP. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347B 102.9/104.2/108.2 - 6" x 4" SEWER SERVICE TAP (NEW SERVICE ON EXISTING PIPE UNDERGOING TRENCHLESS REPAIR), TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP. NEW TAP SHALL BE (W/ APPROVAL OF ENGINEER OR INSPECTOR ON CASE-SPECIFIC BASIS): FULL BODY WYE W/ STREET 45(PIPE STUBS AND COUPLINGS INCLUDED), INSERTA-TEE, OR SADDLE; ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)
- 366 EXCAVATE LAUNCHING/RECEIVING PIT FOR HDD, IMPACTOR DEVICE, HDPE ADAPTER AND HDPE PIPE. BACK FILL TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACK FILL MATERIAL, AS DETERMINED OR AGREED TO BY ENGINEER.
- 367 102.9B - INSTALL NEW 6" HIGH DENSITY POLYETHYLENE (HDPE) SDR-17 SEWER PIPE FOR PIPE BURSTING.
- 368 RECONDITION EXISTING MANHOLE.
- 555 608.06 - CONCRETE SIDEWALK (4" THICK)
- 602 608.06 - CONCRETE CURB AND GUTTER (2' WIDE)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 681B 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (5" THICK) (GRADING SX, BINDER GRADE PG 64-22); ONE 3-INCH LIFT, ONE 2-INCH LIFT)
- 681C 401.08 - T-TOP PAVEMENT PATCHING: MILL/PLANE 2" DEEPX2' WIDE PERIMETER AROUND ASPHALT PATCH AREA, PLACE 2" LIFT HOT BITUMINOUS PAVEMENT (GRADING AND GRADE TO MATCH PATCH SPEC.) LIFT, INTEGRAL W/ FINAL 2" LIFT OF PATCHING HBP.
- 730 212 - RESOD AREA AS SHOWN

CONTRACTOR SHALL USE LOW-GROUND-PRESSURE-EQUIPMENT TO CONNECT SERVICE AND SHALL PAD AND PROTECT ACCESS ROUTE AND SPOIL AREA TO PREVENT DAMAGE OR DISTURBANCE TO PARK IMPROVEMENTS.



REVISION	DESCRIPTION	DATE
1	ADDENDUM 1	2009-03-11
2		
3		
4		

DRAWN BY JAH DATE 2008  
 DESIGNED BY DATE  
 CHECKED BY DATE  
 APPROVED BY DATE



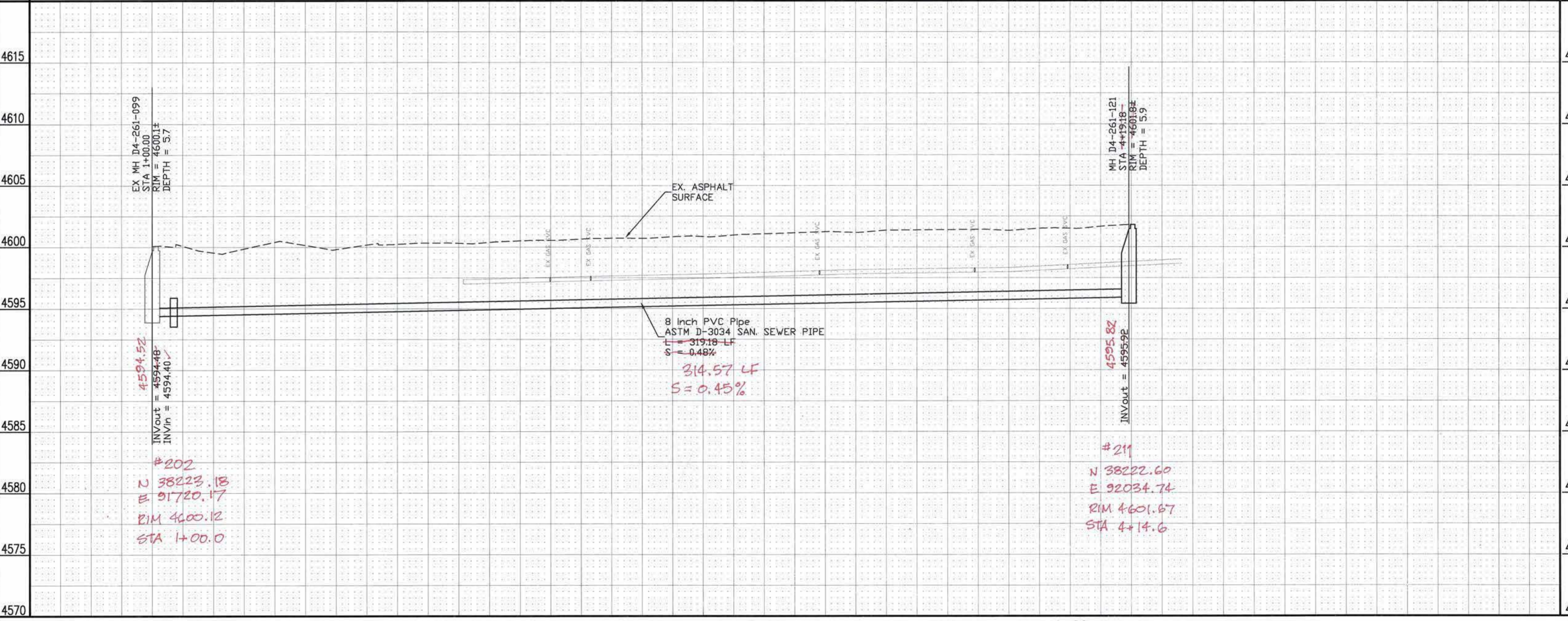
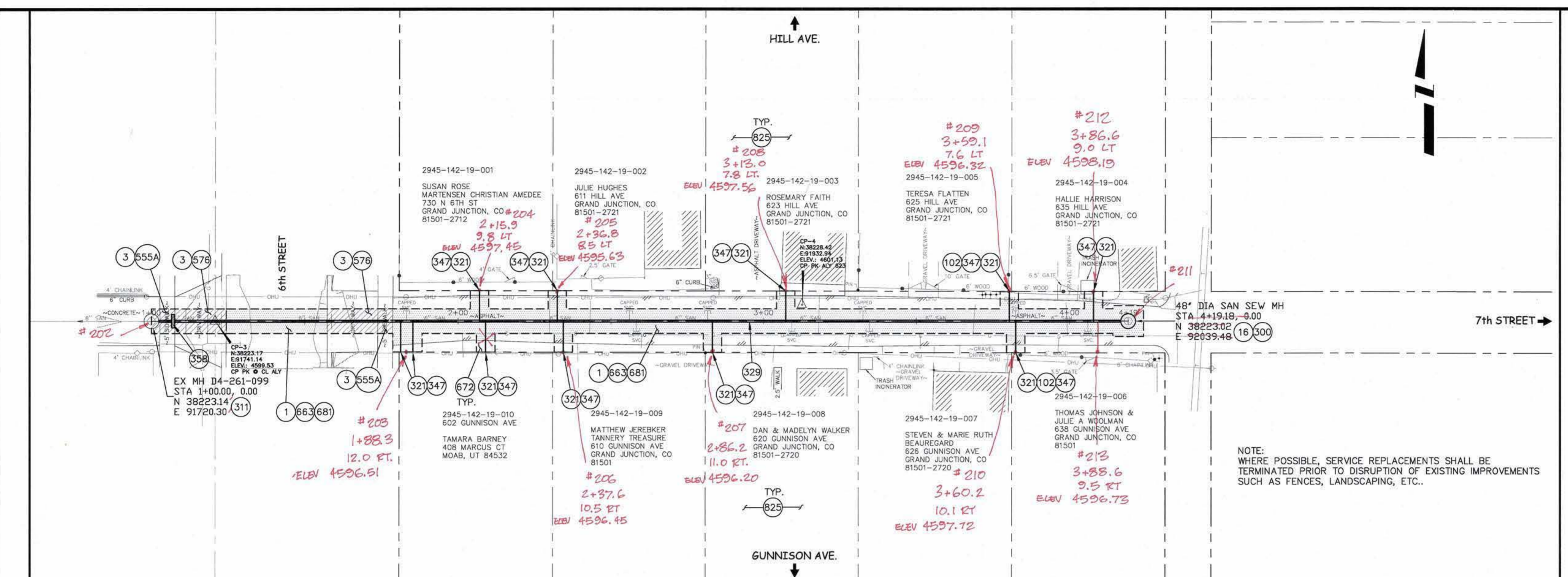
PUBLIC WORKS  
 AND UTILITIES  
 ENGINEERING DIVISION

2008 SANITARY SEWER REPLACEMENTS  
 HAWTHORNE PARK PLAN AND PROFILE  
 STA 1+00 TO STA 5+82

CONSTRUCTION NOTES

- 1 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 102 210 - RESET FENCE AND GATE AS REQUIRED. (HEIGHT AND MATERIAL AS SHOWN ON PLAN)
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE (8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08). CONTRACTOR SHALL CONNECT THE SEWER PIPE TO THE EXISTING MANHOLE IN SUCH A WAY THAT ENSURES A WATERTIGHT CONNECTION. CONTRACTOR SHALL RECONSTRUCT MH INVERT, COST SHALL BE INCIDENTAL TO THE COST OF "CONNECT TO EXISTING MANHOLE" BID ITEM.
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES CONNECTION TO EXISTING/NEW LINE/TAP. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)
- 555A 608.06 - CONCRETE SIDEWALK (8" THICK)
- 576 608.06 - CONCRETE DRIVEWAY SECTION (8" THICK) (COMMERCIAL)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 825 CONTRACTOR IS RESPONSIBLE FOR REPAIR COSTS ASSOCIATED WITH ANY/ALL DAMAGE TO PRIVATE PROPERTY BEHIND ROW LINE OR EASEMENT LIMITS.

NOTE: WHERE POSSIBLE, SERVICE REPLACEMENTS SHALL BE TERMINATED PRIOR TO DISRUPTION OF EXISTING IMPROVEMENTS SUCH AS FENCES, LANDSCAPING, ETC..



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
			JAH	2008
			DESIGNED BY	
			CHECKED BY	
			APPROVED BY	

SCALES:  
 PLAN: HORIZONTAL 1" = 20'  
 PROFILE: HORIZONTAL 1" = 20', VERTICAL 1" = 5'

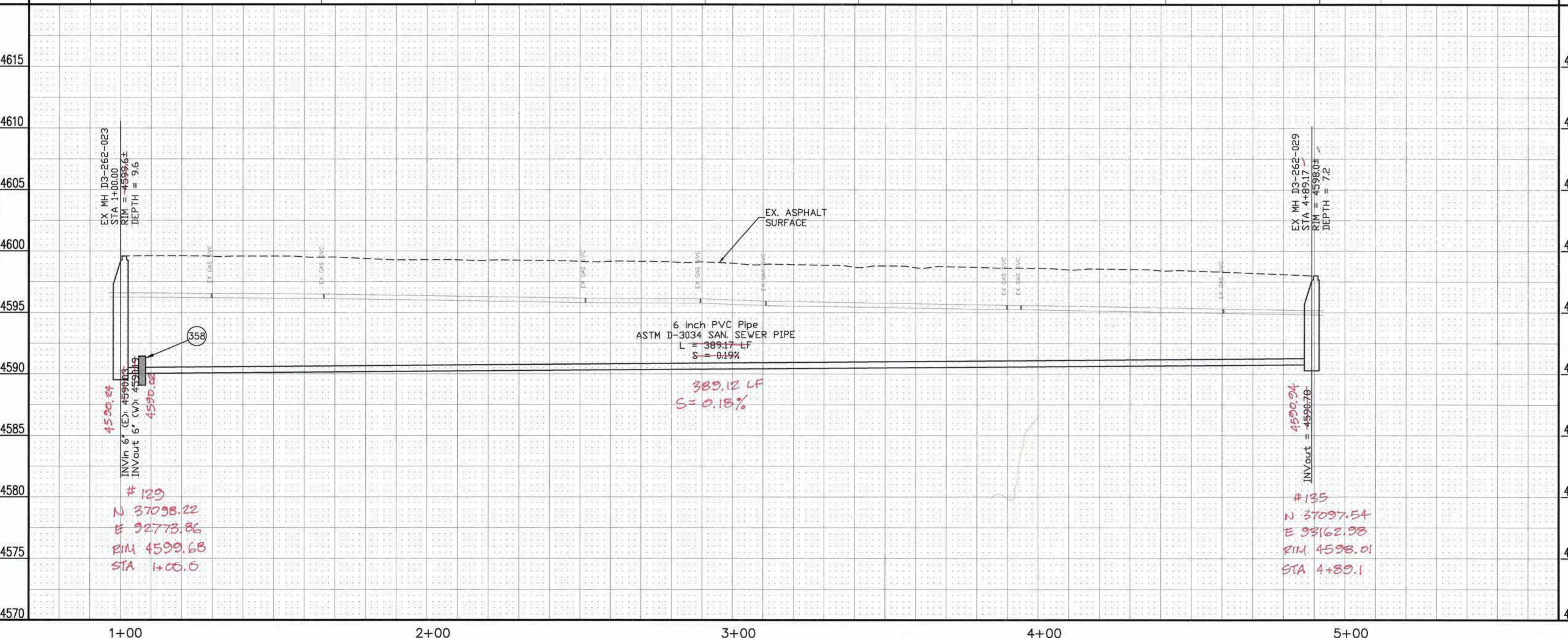
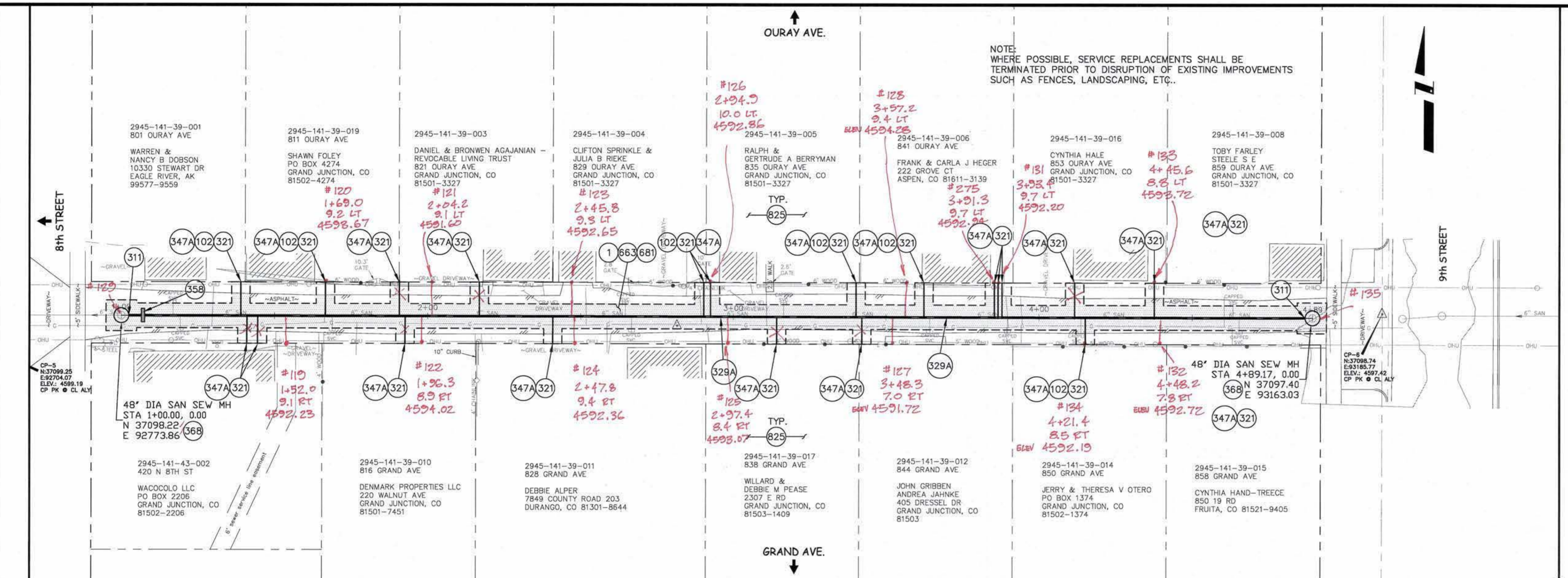
PUBLIC WORKS  
 AND UTILITIES  
 ENGINEERING DIVISION

2008 SANITARY SEWER REPLACEMENTS  
 ALLEY @ 6th ST. BETWEEN GUNNISON AVE. AND HILL AVE. 5  
 PLAN AND PROFILE STA 1+00 TO STA 4+19

CONSTRUCTION NOTES

- 1 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 102 210 - RESET FENCE AND GATE AS REQUIRED. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE (8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08). CONTRACTOR SHALL CONNECT THE SEWER PIPE TO THE EXISTING MANHOLE IN SUCH A WAY THAT ENSURES A WATERTIGHT CONNECTION. CONTRACTOR SHALL RECONSTRUCT MH INVERT, COST SHALL BE INCIDENTAL TO THE COST OF "CONNECT TO EXISTING MANHOLE" BID ITEM.
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES CONNECTION TO EXISTING/NEW LINE/TAP. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 329A 102.9/108.2 - 6" GRAVITY SEWER PIPE (ASTM D-3034 SDR-35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347A 102.9/104.2/108.2 - 6" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)
- 368 RECONDITION EXISTING MANHOLE.
- 66.3 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1/2" LIFTS)
- 825 CONTRACTOR IS RESPONSIBLE FOR REPAIR COSTS ASSOCIATED WITH ANY/ALL DAMAGE TO PRIVATE PROPERTY BEHIND ROW LINE OR EASEMENT LIMITS.

NOTES  
WHERE POSSIBLE, SERVICE REPLACEMENTS SHALL BE TERMINATED PRIOR TO DISRUPTION OF EXISTING IMPROVEMENTS SUCH AS FENCES, LANDSCAPING, ETC..



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
			JAH	2008
			DESIGNED BY	DATE
			CHECKED BY	DATE
			APPROVED BY	DATE

SCALES:  
 PLAN: 1" = 20'  
 PROFILE: HORIZONTAL 1" = 20', VERTICAL 1" = 5'

**CITY OF Grand Junction COLORADO**

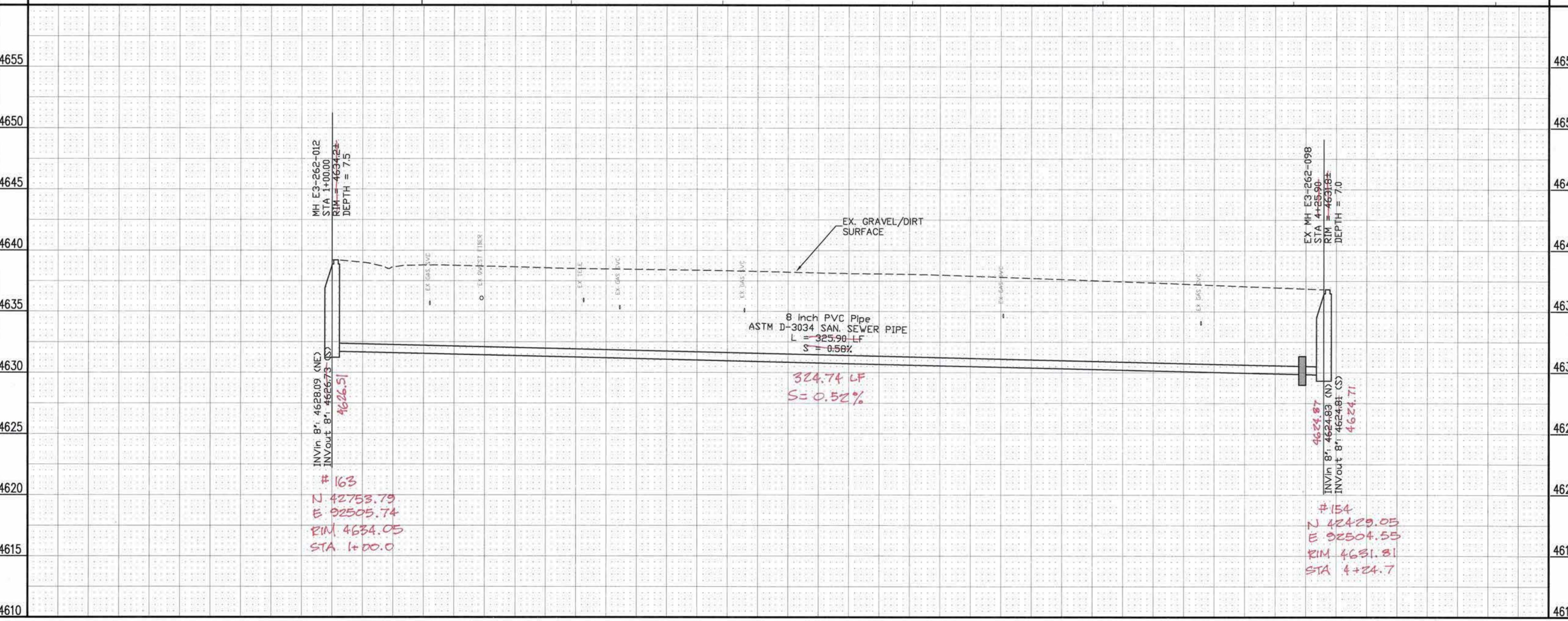
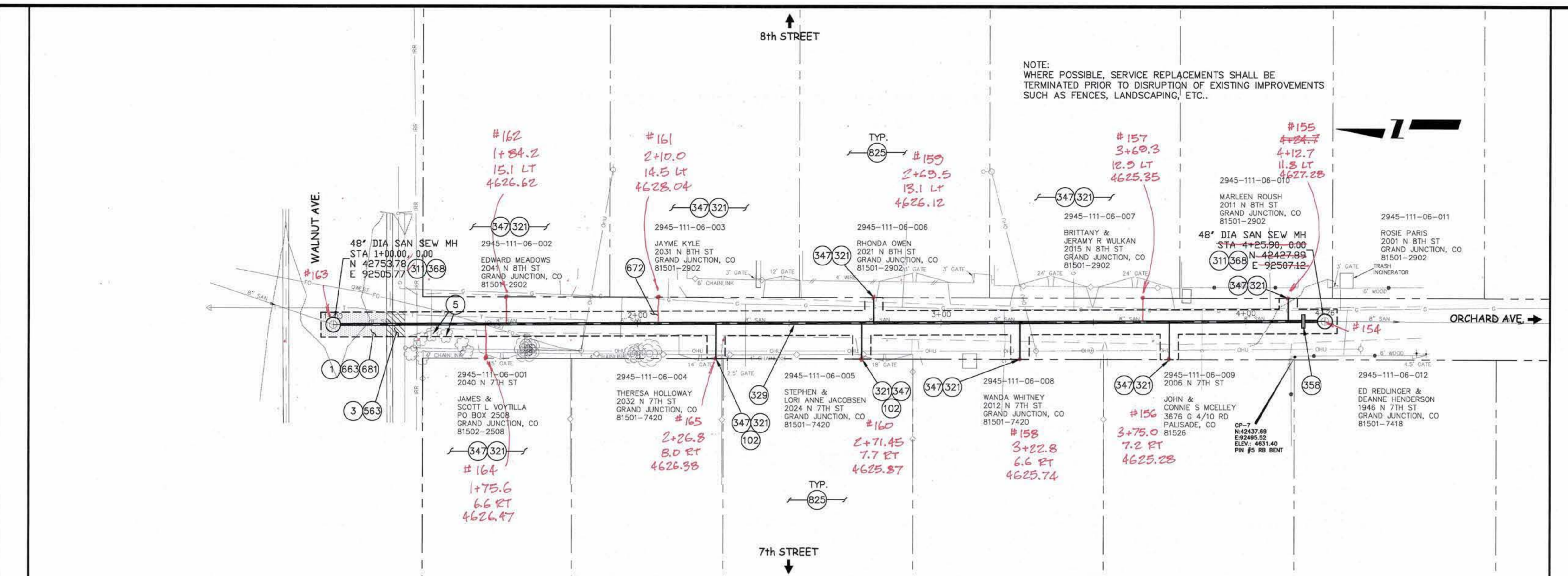
**PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION**

**2008 SANITARY SEWER REPLACEMENTS ALLEY 8th ST. - 9th ST. / OURAY AVE. AND GRAND AVE. PLAN AND PROFILE STA 1+00 TO STA 4+90**

CONSTRUCTION NOTES

- 1 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 5 202 - REMOVAL OF BUSH
- 102 210 - RESET FENCE AND GATE AS REQUIRED. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE (8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08). CONTRACTOR SHALL CONNECT THE SEWER PIPE TO THE EXISTING MANHOLE IN SUCH A WAY THAT ENSURES A WATERTIGHT CONNECTION. CONTRACTOR SHALL RECONSTRUCT MH INVERT, COST SHALL BE INCIDENTAL TO THE COST OF "CONNECT TO EXISTING MANHOLE" BID ITEM.
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES CONNECTION TO EXISTING/NEW LINE/TAP. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)
- 368 RECONDITION EXISTING MANHOLE.
- 563 608.06 - MONOLITHIC DRIVE OVER CURB, GUTTER AND SIDEWALK (6'-6" WIDE)(8" THICK)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 825 CONTRACTOR IS RESPONSIBLE FOR REPAIR COSTS ASSOCIATED WITH ANY/ALL DAMAGE TO PRIVATE PROPERTY BEHIND ROW LINE OR EASEMENT LIMITS.

NOTE:  
WHERE POSSIBLE, SERVICE REPLACEMENTS SHALL BE TERMINATED PRIOR TO DISRUPTION OF EXISTING IMPROVEMENTS SUCH AS FENCES, LANDSCAPING, ETC..



REVISION	DESCRIPTION	DATE

DRAWN BY	JAH	DATE	2008
DESIGNED BY		DATE	
CHECKED BY		DATE	
APPROVED BY		DATE	

SCALES:	PLAN	PROFILE
	HORIZONTAL 1" = 20'	HORIZONTAL 1" = 20'
	VERTICAL 1" = 5'	VERTICAL 1" = 5'



**PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION**

**2008 SANITARY SEWER REPLACEMENTS  
ALLEY @ WALNUT AVE.. BETWEEN 7th ST. AND 8th ST.  
PLAN AND PROFILE STA 1+00 TO STA 4+26**

CONSTRUCTION NOTES

- 1 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE (6" OR 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08). CONTRACTOR SHALL CONNECT THE SEWER PIPE TO THE EXISTING MANHOLE IN SUCH A WAY THAT ENSURES A WATERTIGHT CONNECTION. CONTRACTOR SHALL RECONSTRUCT MH INVERT, COST SHALL BE INCIDENTAL TO THE COST OF "CONNECT TO EXISTING MANHOLE" BID ITEM.
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES CONNECTION TO EXISTING/NEW LINE/TAP. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (ASTM D-3034 SDR-35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 369 104/108.5 - ABANDON 4' DIA. MANHOLE; REMOVE CONE; RING AND COVER TO CITY SHOPS; FILL BASE W/ 1 FT CLASS B CONCRETE, THEN COMPACTED PIT RUN TO SUBGRADE. ALL WORK EXCEPT ROAD BASE AND ASPHALT PATCH PAID FOR UNDER THIS PAY ITEM.
- 569 608.06 - MONOLITHIC VERTICAL CURB, GUTTER AND SIDEWALK (MATCH EXISTING)
- 603 608.06 - CONCRETE CURB AND GUTTER (1'-6" WIDE)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 671 304 - WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. MATCH EXISTING TYPE. THICKNESS IS 2" MIN. AND 3" MAX.
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 730 212 - RESOD AREA AS SHOWN. INCLUDES STOCKPILE AND REUSE OF 12" OF EXISTING TOPSOIL (MUST BE KEPT FREE OF DETRITUS AND APPROVED BY INSPECTOR OR ENGINEER), OR IMPORT OF 12" OF NEW TOPSOIL, APPROVED BY INSPECTOR OR ENGINEER.
- 825 CONTRACTOR IS RESPONSIBLE FOR REPAIR COSTS ASSOCIATED WITH ANY/ALL DAMAGE TO PRIVATE PROPERTY BEHIND ROW LINE OR EASEMENT LIMITS.

SEE SHEET 9

SEE SHEET 8

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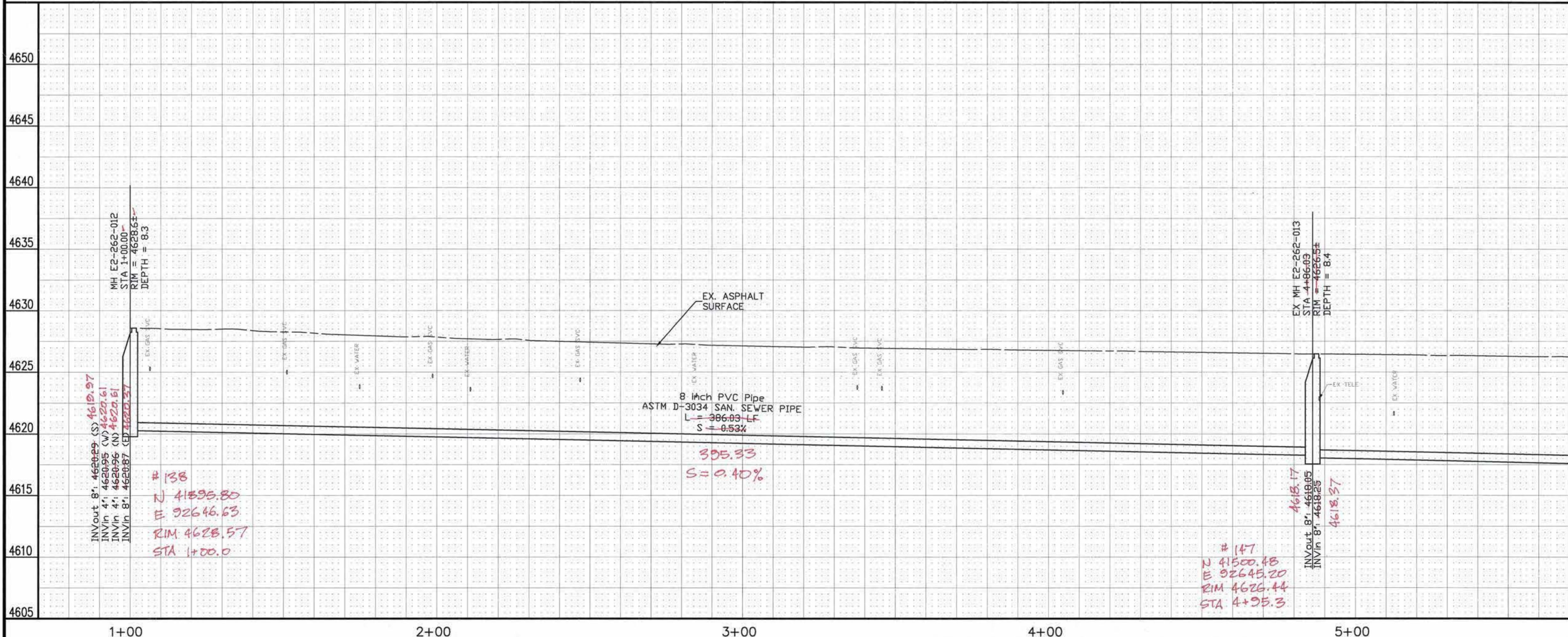
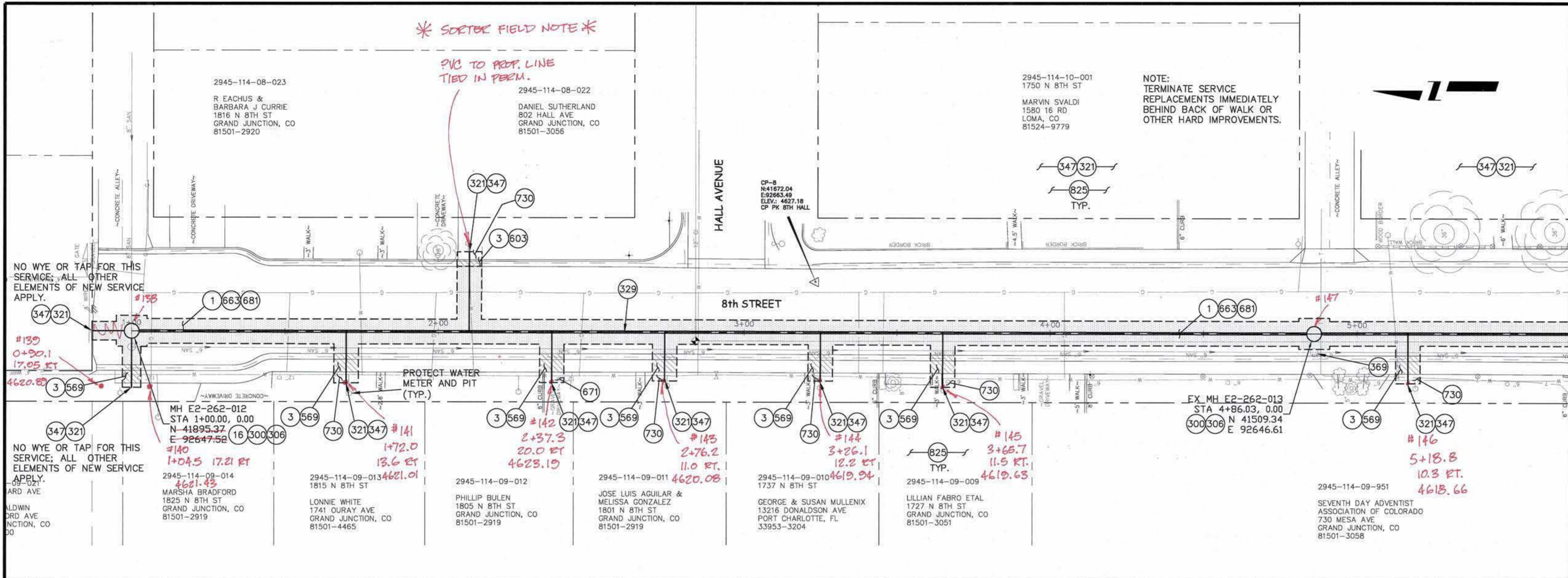
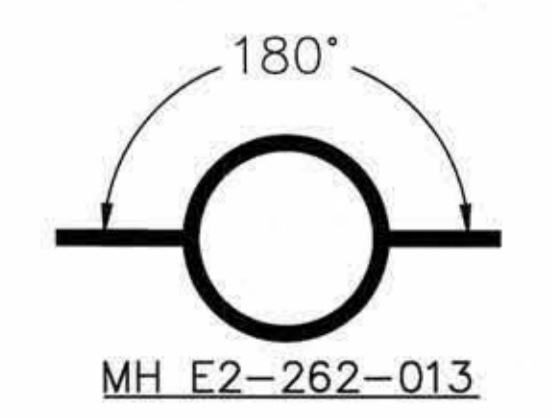
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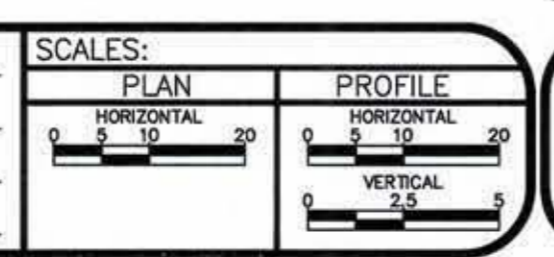
4610

4605



REVISION	DESCRIPTION	DATE

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APPROVED BY		DATE	



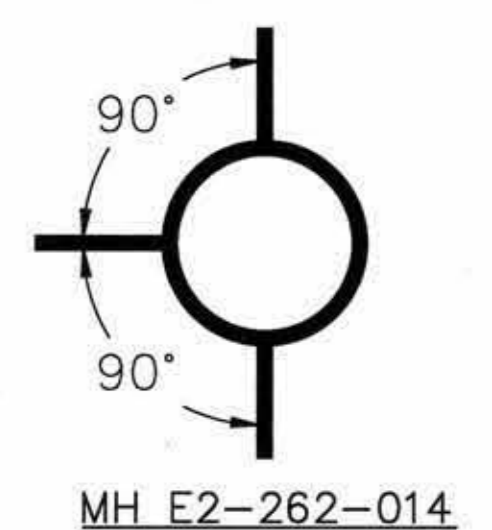
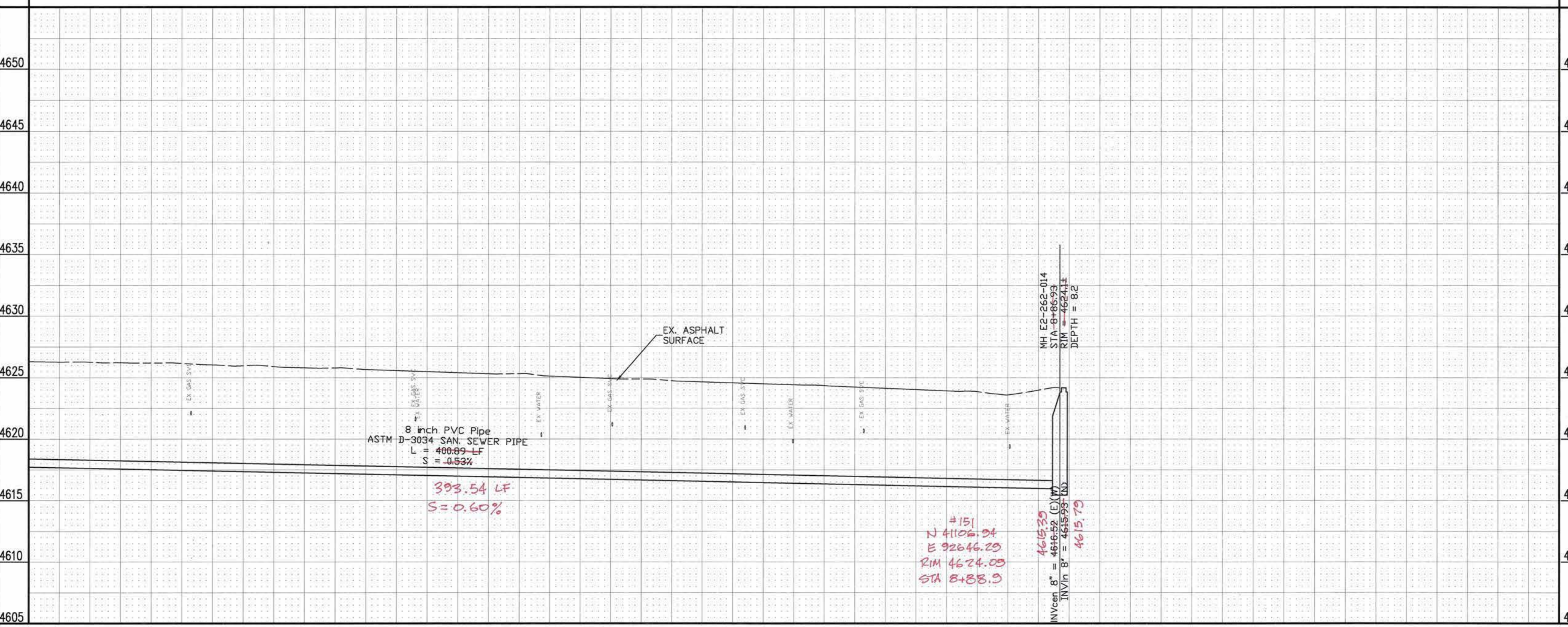
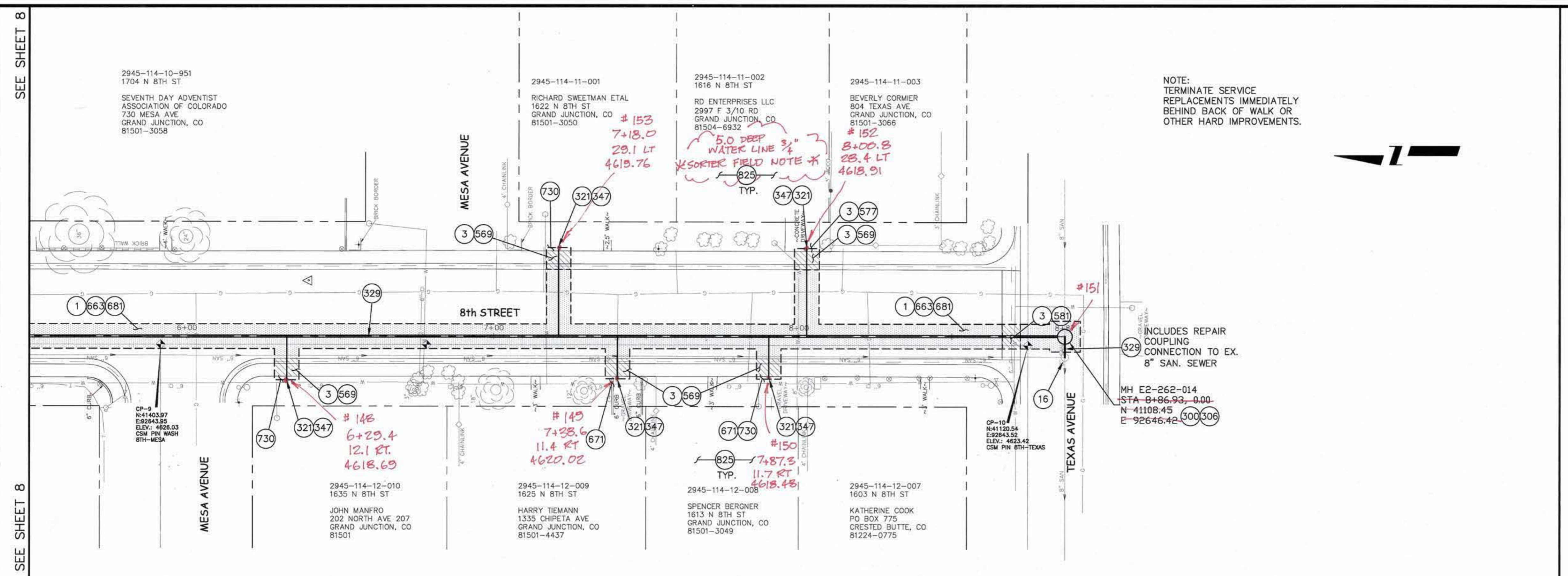
**PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION**

**2008 SANITARY SEWER REPLACEMENTS  
8th STREET PLAN AND PROFILE  
STA 1+00 TO STA 5+70**



- 1 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES CONNECTION TO EXISTING/NEW LINE/TAP. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (ASTM D-3034 SDR-35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45°, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 569 608.06 - MONOLITHIC VERTICAL CURB, GUTTER AND SIDEWALK (MATCH EXISTING)
- 577 608.06 - CONCRETE DRIVEWAY SECTION (6" THICK) (RESIDENTIAL)
- 581 608.06 - CONCRETE DRAINAGE PAN (6' WIDE)
- 603 608.06 - CONCRETE CURB AND GUTTER (1'-6" WIDE)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 671 304 - WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. MATCH EXISTING TYPE. THICKNESS IS 2" MIN. AND 3" MAX.
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1/2" LIFTS)
- 730 212 - RESOD AREA AS SHOWN. INCLUDES STOCKPILE AND REUSE OF 12" OF EXISTING TOPSOIL (MUST BE KEPT FREE OF DETRITUS AND APPROVED BY INSPECTOR OR ENGINEER), OR IMPORT OF 12" OF NEW TOPSOIL, APPROVED BY INSPECTOR OR ENGINEER.
- 825 CONTRACTOR IS RESPONSIBLE FOR REPAIR COSTS ASSOCIATED WITH ANY/ALL DAMAGE TO PRIVATE PROPERTY BEHIND ROW LINE OR EASEMENT LIMITS.

NOTE:  
TERMINATE SERVICE  
REPLACEMENTS IMMEDIATELY  
BEHIND BACK OF WALK OR  
OTHER HARD IMPROVEMENTS.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			JAH	2008
2				
3				
4				

DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

SCALES:

PLAN	PROFILE
HORIZONTAL 1" = 20'	HORIZONTAL 1" = 20'
VERTICAL 1" = 5'	VERTICAL 1" = 5'

**CITY OF Grand Junction COLORADO**

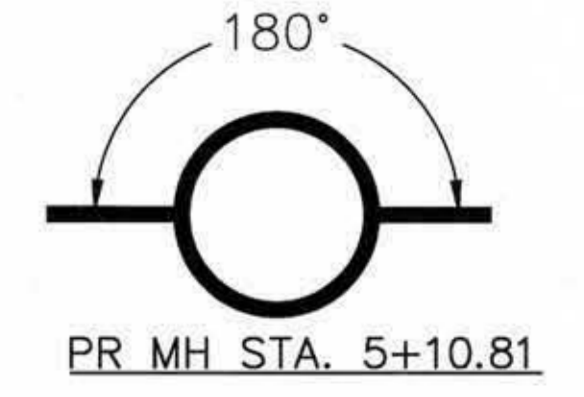
**PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION**

**2008 SANITARY SEWER REPLACEMENTS  
8th STREET PLAN AND PROFILE  
STA 6+00 TO STA 8+87**

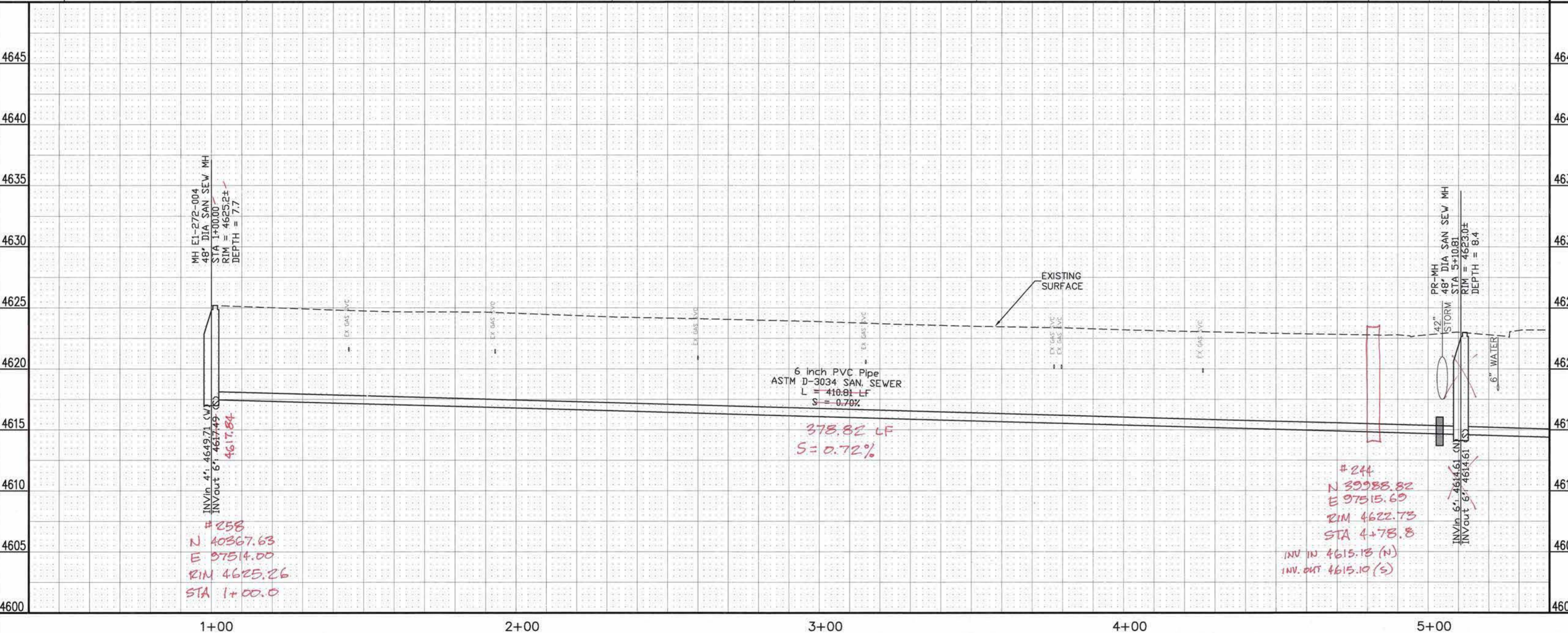
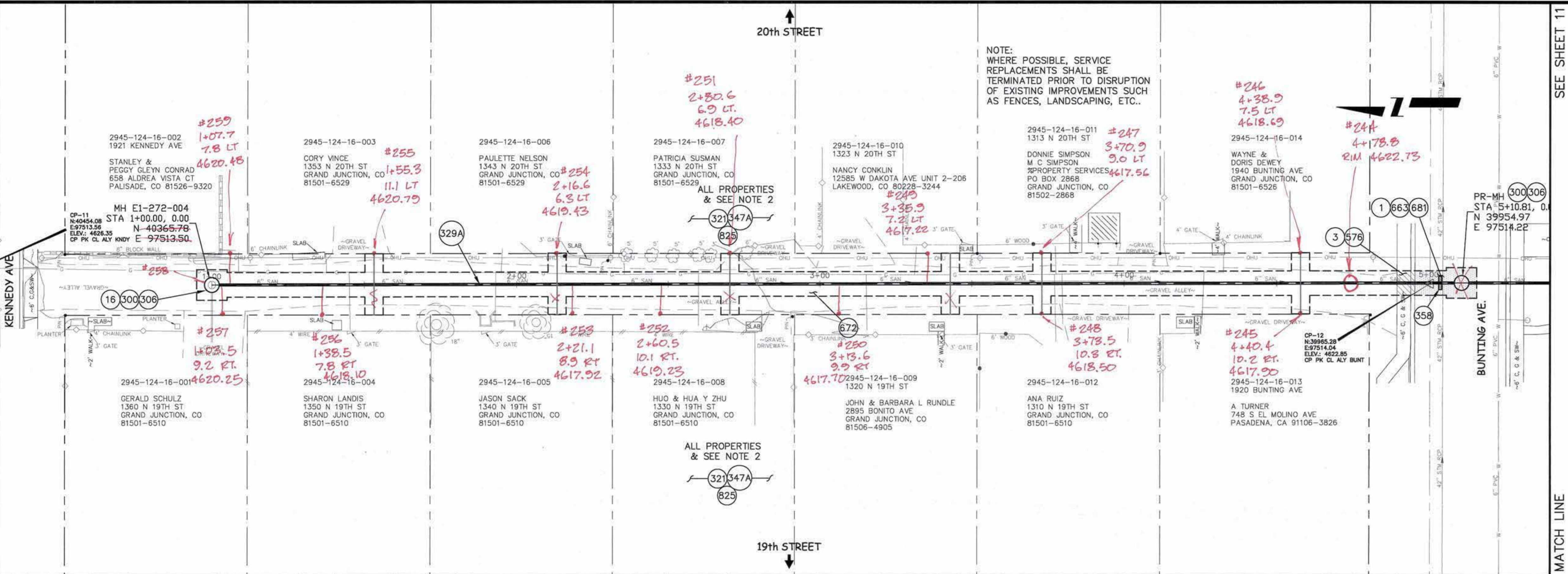
- 1 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 300 102.11/108.5 - INSTALL NEW SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE(S), FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 306 102.11/108.5 - MANHOLE BARREL SECTION (DEPTH>5')(DIA. = 48"). INCLUDES STORM SEWER AND SANITARY SEWER MANHOLE BARREL SECTIONS.
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE (6" OR 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08). CONTRACTOR SHALL CONNECT THE SEWER PIPE TO THE EXISTING MANHOLE IN SUCH A WAY THAT ENSURES A WATERIGHT CONNECTION. CONTRACTOR SHALL RECONSTRUCT MH INVERT, COST SHALL BE INCIDENTAL TO THE COST OF "CONNECT TO EXISTING MANHOLE" BID ITEM.
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES CONNECTION TO EXISTING/NEW LINE/TAP. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 329A 102.9/108.2 - 6" GRAVITY SEWER PIPE (ASTM D-3034 SDR-35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347A 102.9/104.2/108.2 - 6" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE). TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)
- 576 608.06 - CONCRETE DRIVEWAY SECTION (8" THICK) (RESIDENTIAL)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 825 CONTRACTOR IS RESPONSIBLE FOR REPAIR COSTS ASSOCIATED WITH ANY/ALL DAMAGE TO PRIVATE PROPERTY BEHIND ROW LINE OR EASEMENT LIMITS.

NOTE:

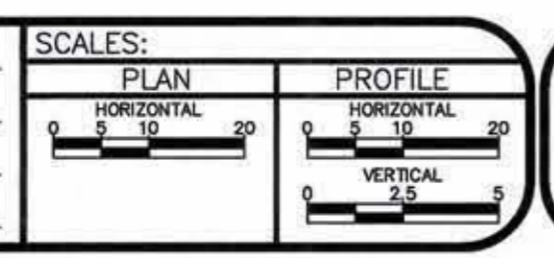
1. XCEL GAS MAIN WITHIN THE ALLEY ROW IS APPROXIMATELY 30" - 36" IN DEPTH. GAS SERVICES TO EACH RESIDENCE/LOT IS A MINIMUM OF 24" AND A MAXIMUM OF 36" IN DEPTH.
2. ALL SANITARY SEWER SERVICE LINES CONNECTING TO EACH RESIDENTIAL LOT ARE SHOWN FOR CLARITY AND ESTIMATED QUANTITY TAKE-OFF. DUE TO THE PRESENT CONDITION OF THE EXISTING SEWER MAIN, ACTUAL SEWER TAP LOCATIONS COULD NOT BE DETERMINED.
3. REMOVAL OF ASPHALT PAVEMENT WILL BE CONSIDERED INCIDENTAL TO THE WORK AND WILL NOT BE MEASURED OR PAID FOR SEPARATELY, SHOULD ASPHALT BE DISCOVERED BENEATH THE ALLEY'S GRAVEL SURFACE, AS CITED IN SECTION 108.13.



NOTE:  
WHERE POSSIBLE, SERVICE REPLACEMENTS SHALL BE TERMINATED PRIOR TO DISRUPTION OF EXISTING IMPROVEMENTS SUCH AS FENCES, LANDSCAPING, ETC..



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			DESIGNED BY	DATE
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			APPROVED BY	DATE



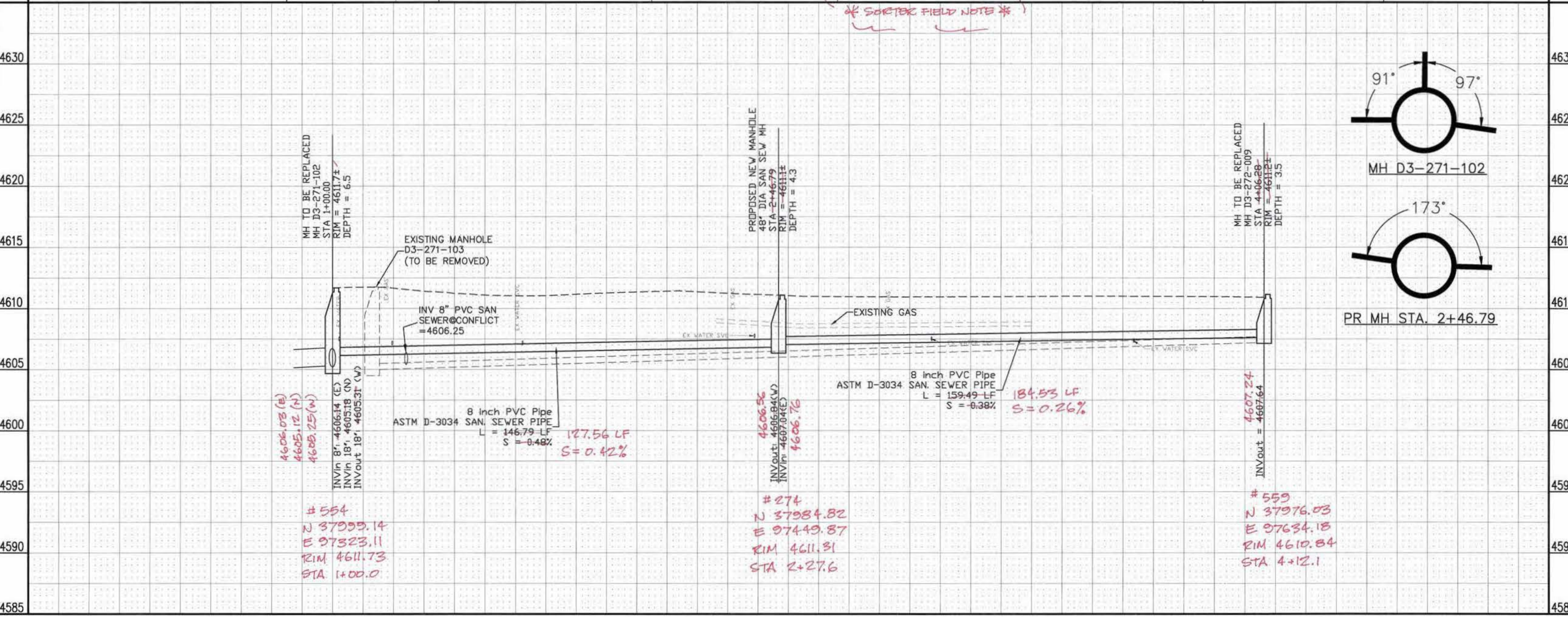
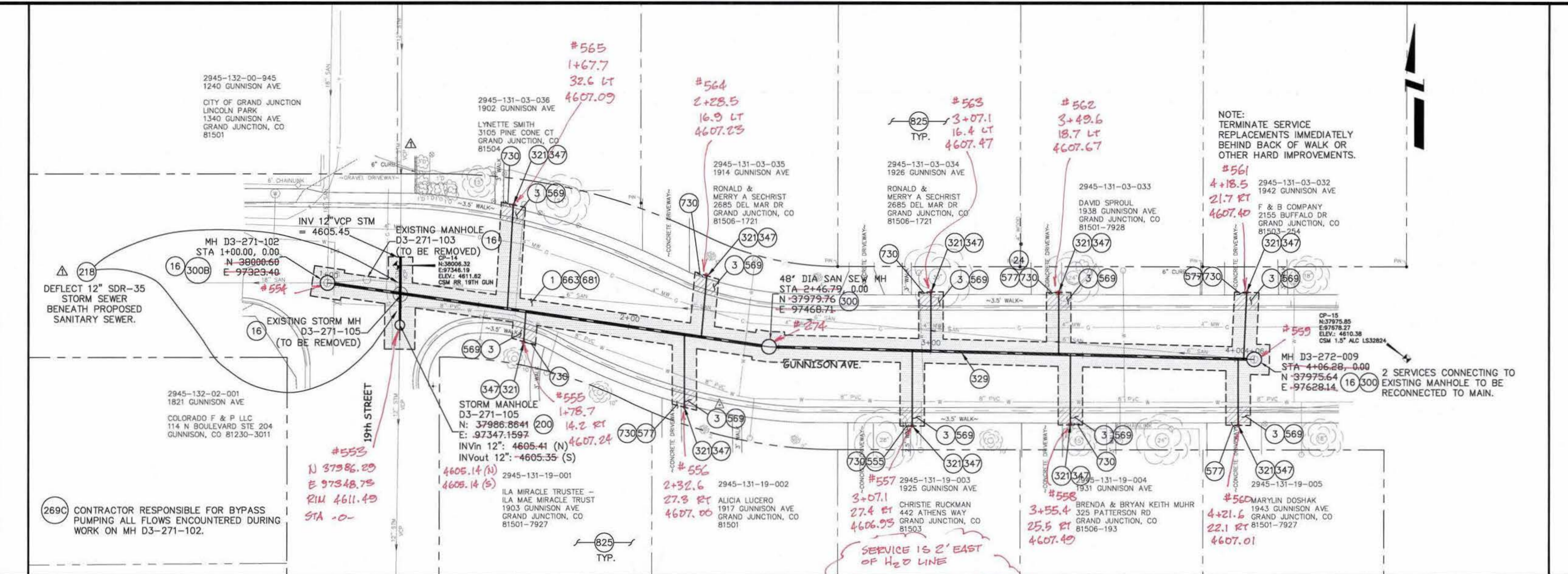
**PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION**

**2008 SANITARY SEWER REPLACEMENTS ALLEY KENNEDY AVE. TO BUNTING AVE. / 19th ST. AND 20th ST. 10 PLAN AND PROFILE STA 1+00 TO STA 5+00**



CONSTRUCTION NOTES

- 1 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 24 210 - RESET LANDSCAPE APPURTENANCE.
- 200 102.11/108.5 - STORM SEWER BASIC MANHOLE (48" I.D.) INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).
- 218 102.10/108.20 - 12-INCH STORM DRAIN PIPE (PVC, SDR-35) INCLUDES CALDER/FERNCO COUPLINGS AT TIE-IN ENDS. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS IF ACCEPTABLE OR IMPORTED BACKFILL MEETING 103.16
- 269C UU/108.2 - BYPASS PUMPING FOR ALL OPERATIONS IMPACTING MANHOLE REMOVAL AND REPLACEMENT AT 19TH STREET AND GUNNISON AVE. CONTRACTOR SHALL INDEPENDENTLY VERIFY FLOW RATES.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 300B 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (60" I.D.) (DEPTH AS SHOWN ON PLANS) . INCLUDES CONNECTION OF ADJACENT SEWER LINES (INCLUDING PIPE STUB LENGTHS AND COUPLINGS), FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (ASTM D-3034 SDR-35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 555 608.06 - CONCRETE SIDEWALK (4" THICK)
- 563 608.06 - MONOLITHIC DRIVE OVER CURB, GUTTER AND SIDEWALK (MATCH EXISTING)
- 569 608.06 - MONOLITHIC VERTICAL CURB, GUTTER AND SIDEWALK (MATCH EXISTING)
- 577 608.06 - CONCRETE DRIVEWAY SECTION (6" THICK) (RESIDENTIAL)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 825 CONTRACTOR IS RESPONSIBLE FOR REPAIR COSTS ASSOCIATED WITH ANY/ALL DAMAGE TO PRIVATE PROPERTY BEHIND ROW LINE OR EASEMENT LIMITS.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION			JAH	2008
REVISION				
REVISION				

DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

SCALES:

PLAN	PROFILE
HORIZONTAL 1" = 20'	HORIZONTAL 1" = 20'
VERTICAL 1" = 5'	VERTICAL 1" = 5'

CITY OF  
**Grand Junction**  
COLORADO

**PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION**

**2008 SANITARY SEWER REPLACEMENTS  
GUNNISON AVE. PLAN AND PROFILES  
STA 1+00 TO STA 4+06**

CONSTRUCTION NOTES

- 1) 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3) 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16) 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 300) 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 306) 102.11/108.5 - MANHOLE BARREL SECTION (DEPTH>5')(DIA. = 48"). INCLUDES STORM SEWER AND SANITARY SEWER MANHOLE BARREL SECTIONS.
- 311) 102.11/108.5 - CONNECT TO EXISTING MANHOLE (8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08). CONTRACTOR SHALL CONNECT THE SEWER PIPE TO THE EXISTING MANHOLE IN SUCH A WAY THAT ENSURES A WATERTIGHT CONNECTION. CONTRACTOR SHALL RECONSTRUCT MH INVERT, COST SHALL BE INCIDENTAL TO THE COST OF "CONNECT TO EXISTING MANHOLE" BID ITEM.
- 321) 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES CONNECTION TO EXISTING/NEW LINE/TAP. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 329) 102.9/108.2 - 8" GRAVITY SEWER PIPE (ASTM D-3034 SDR-35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347) 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE). TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 358) 103 - CLAY CUT-OFF WALL (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)
- 368) RECONDITION EXISTING MANHOLE (SEE NOTE BELOW).
- 555) 608.06 - CONCRETE SIDEWALK (4" THICK)
- 569) 608.06 - MONOLITHIC VERTICAL CURB, GUTTER AND SIDEWALK (MATCH EXISTING)
- 576) 608.06 - CONCRETE DRIVEWAY SECTION (8" THICK) (COMMERCIAL)
- 602) 608.06 - CONCRETE CURB AND GUTTER (2' WIDE)
- 663) 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 681) 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 681B) 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (5" THICK) (GRADING SX, BINDER GRADE PG 64-22); ONE 3-INCH LIFT, ONE 2-INCH LIFT)
- 681C) 401.08 - T-TOP PAVEMENT PATCHING: MILL/PLANE 2" DEEPX2' WIDE PERIMETER AROUND ASPHALT PATCH AREA, PLACE 2" LIFT HOT BITUMINOUS PAVEMENT (GRADING AND GRADE TO MATCH PATCH SPEC.) LIFT, INTERGRAL W/ FINAL 2" LIFT OF PATCHING HBP.
- 825) CONTRACTOR IS RESPONSIBLE FOR REPAIR COSTS ASSOCIATED WITH ANY/ALL DAMAGE TO PRIVATE PROPERTY BEHIND ROW LINE OR EASEMENT LIMITS.
- 845) NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE COVER SHEET WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.
- 850) THE CONTRACTOR SHALL COORDINATE THE REPLACEMENT OF TRAFFIC LOOPS WITH RICK RIPLEY, CITY OF GRAND JUNCTION TRAFFIC DEPARTMENT, AT 244-1573.

NOTE:  
TERMINATE SERVICE REPLACEMENTS IMMEDIATELY BEHIND BACK OF WALK, CURB AND GUTTER, OR OTHER HARD IMPROVEMENTS.

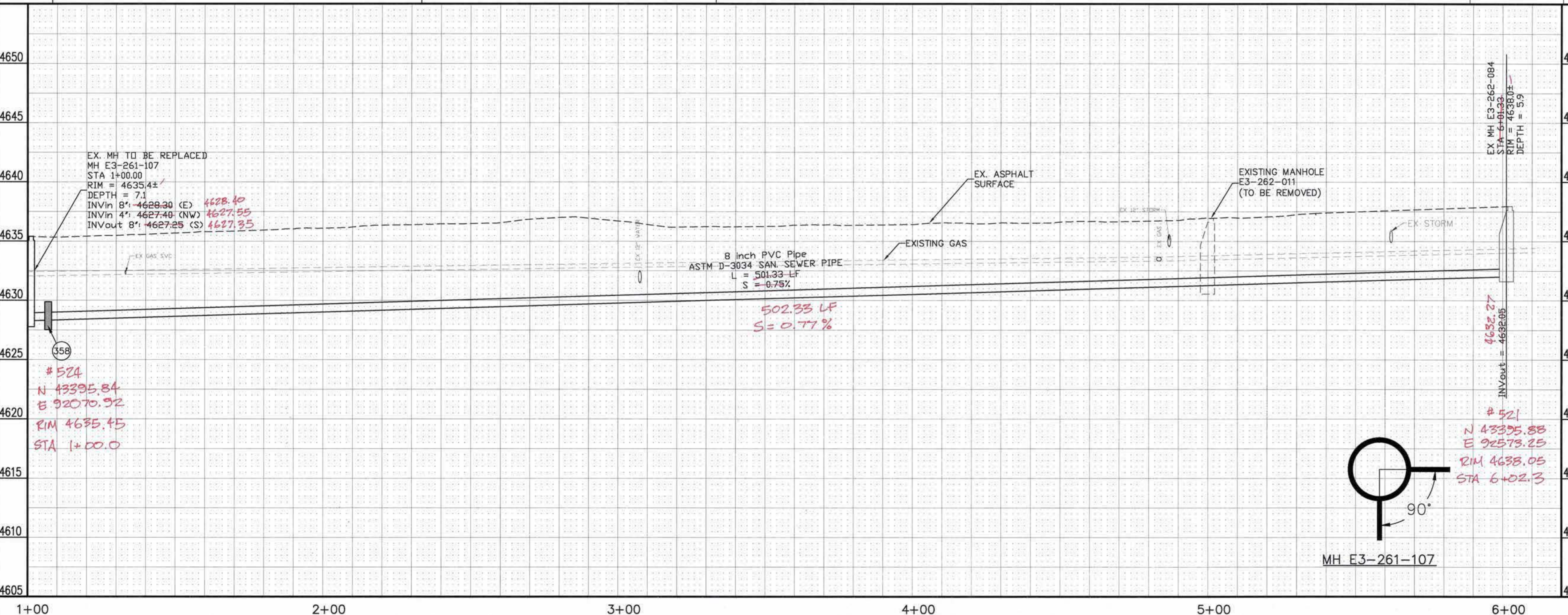
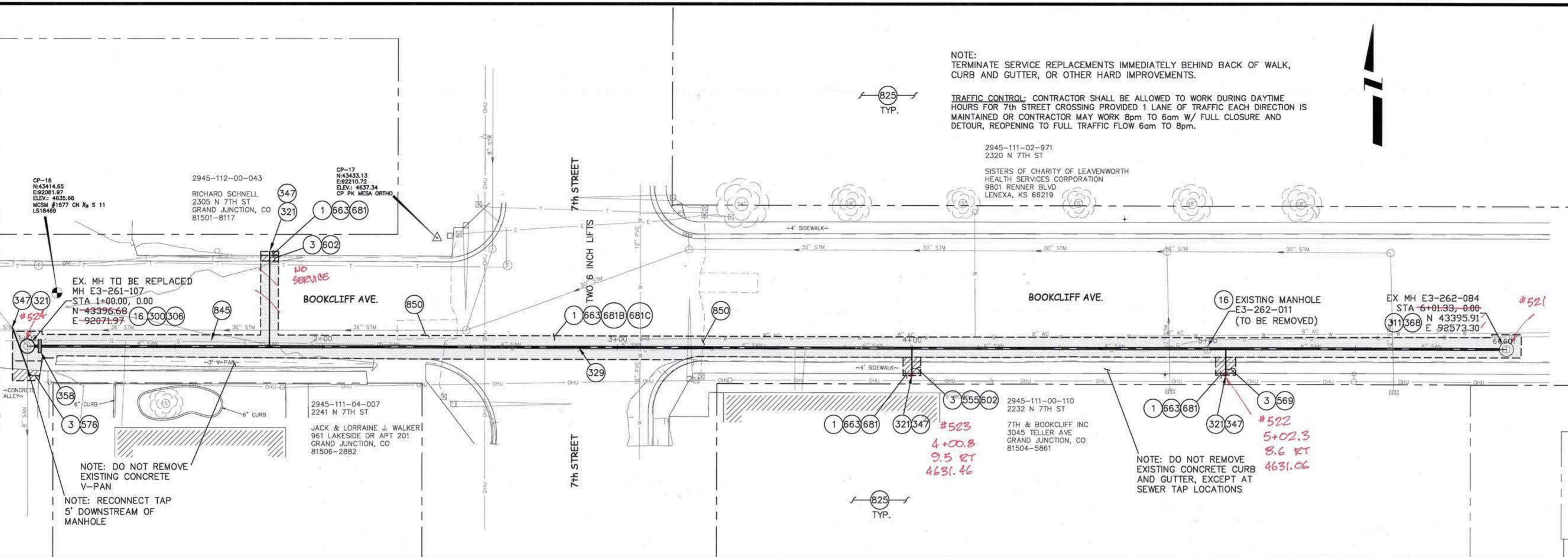
TRAFFIC CONTROL: CONTRACTOR SHALL BE ALLOWED TO WORK DURING DAYTIME HOURS FOR 7th STREET CROSSING PROVIDED 1 LANE OF TRAFFIC EACH DIRECTION IS MAINTAINED OR CONTRACTOR MAY WORK 8pm TO 6am W/ FULL CLOSURE AND DETOUR, REOPENING TO FULL TRAFFIC FLOW 6am TO 8pm.

2945-111-02-971  
2320 N 7TH ST  
SISTERS OF CHARITY OF LEAVENWORTH  
HEALTH SERVICES CORPORATION  
9801 RENNER BLVD  
LENEXA, KS 66219

2945-111-00-110  
2232 N 7TH ST  
7TH & BOOKCLIFF INC  
3045 TELLER AVE  
GRAND JUNCTION, CO  
81504-5861

2945-112-00-043  
RICHARD SCHNELL  
2305 N 7TH ST  
GRAND JUNCTION, CO  
81501-8117

2945-111-04-007  
2241 N 7TH ST  
JACK & LORRAINE J. WALKER  
961 LAKESIDE DR APT 201  
GRAND JUNCTION, CO  
81506-2882



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION			JAH	2008
REVISION				
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SCALES:  
PLAN: HORIZONTAL 1" = 20'  
PROFILE: HORIZONTAL 1" = 20', VERTICAL 1" = 2'

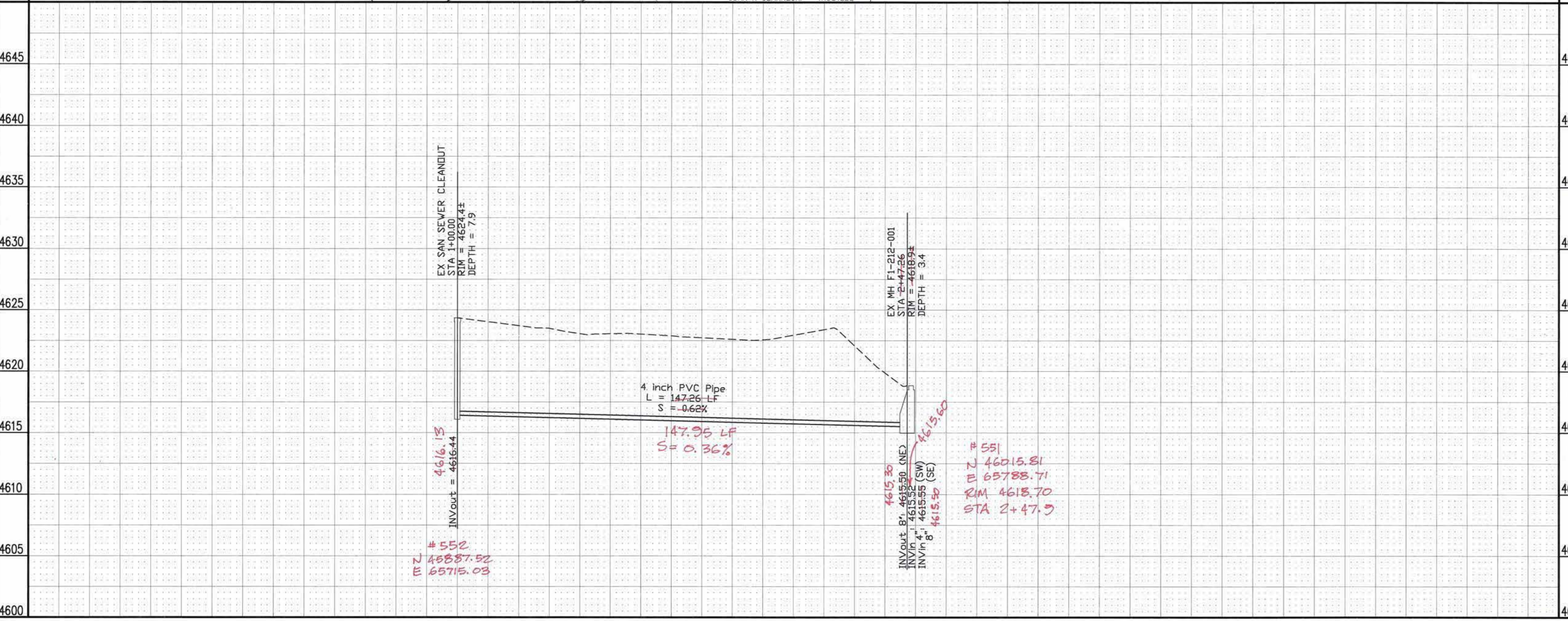
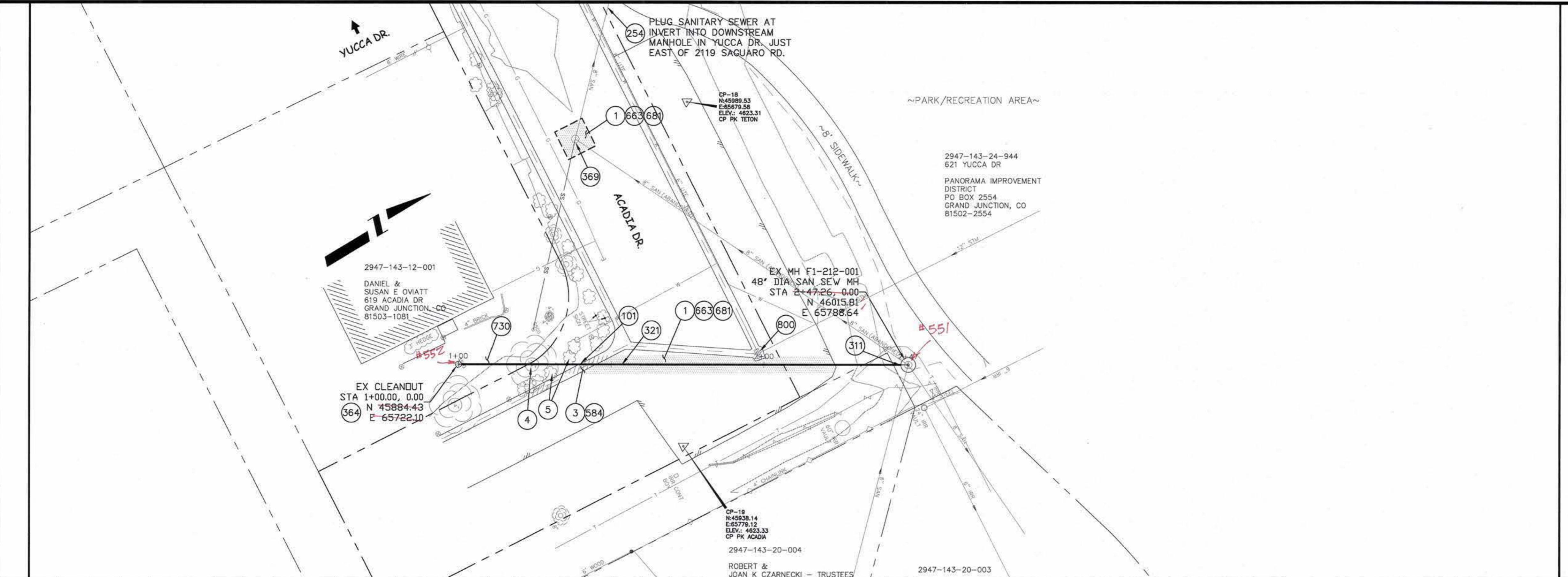


PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION

2008 SANITARY SEWER REPLACEMENTS  
BOOKCLIFF AVE. PLAN AND PROFILES  
STA 1+00 TO STA 6+02

CONSTRUCTION NOTES

- ① 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- ③ 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- ④ 202 - REMOVAL OF TREE.
- ⑤ 202 - REMOVAL OF BUSH
- ⑩1 210 - RESET SPRINKLER SYSTEM (COMPLETE IN PLACE)
- ②54 102.14 - GROUT-SEAL HOLE OPENING IN MAHOLE, CATCH BASIN, OR PIPE STUB; DIA. 18 INCHES OR LESS.
- ③11 102.11/108.5 - CONNECT TO EXISTING MANHOLE (4", 6" OR 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08). CONTRACTOR SHALL CONNECT THE SEWER PIPE TO THE EXISTING MANHOLE IN SUCH A WAY THAT ENSURES A WATERTIGHT CONNECTION. CONTRACTOR SHALL RECONSTRUCT MH INVERT, COST SHALL BE INCIDENTAL TO THE COST OF "CONNECT TO EXISTING MANHOLE" BID ITEM.
- ③21 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- ③64 INSTALL SANITARY SEWER CLEANOUT (INCLUDES CONNECTION TO EXISTING PIPE).
- ③69 104/108.5 - ABANDON 4' DIA. MANHOLE; REMOVE CONE; RING AND COVER TO CITY SHOPS; FILL BASE W/ 1 FT CLASS B CONCRETE. THEN COMPACTED PIT RUN TO SUBGRADE. ALL WORK EXCEPT ROAD BASE AND ASPHALT PATCH PAID FOR UNDER THIS PAY ITEM.
- ⑤84 608.06 - CONCRETE DRAINAGE PAN (2.5' WIDE)
- ⑥63 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- ⑥81 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- ⑦30 212 - RESOD AREA AS SHOWN
- ⑧00 PROTECT STORM INLET AND CONCRETE IN PLACE.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
△			JAH	2008
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DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

SCALES:

PLAN	PROFILE
HORIZONTAL 0 5 10 20	HORIZONTAL 0 5 10 20
VERTICAL 0 5	VERTICAL 0 5

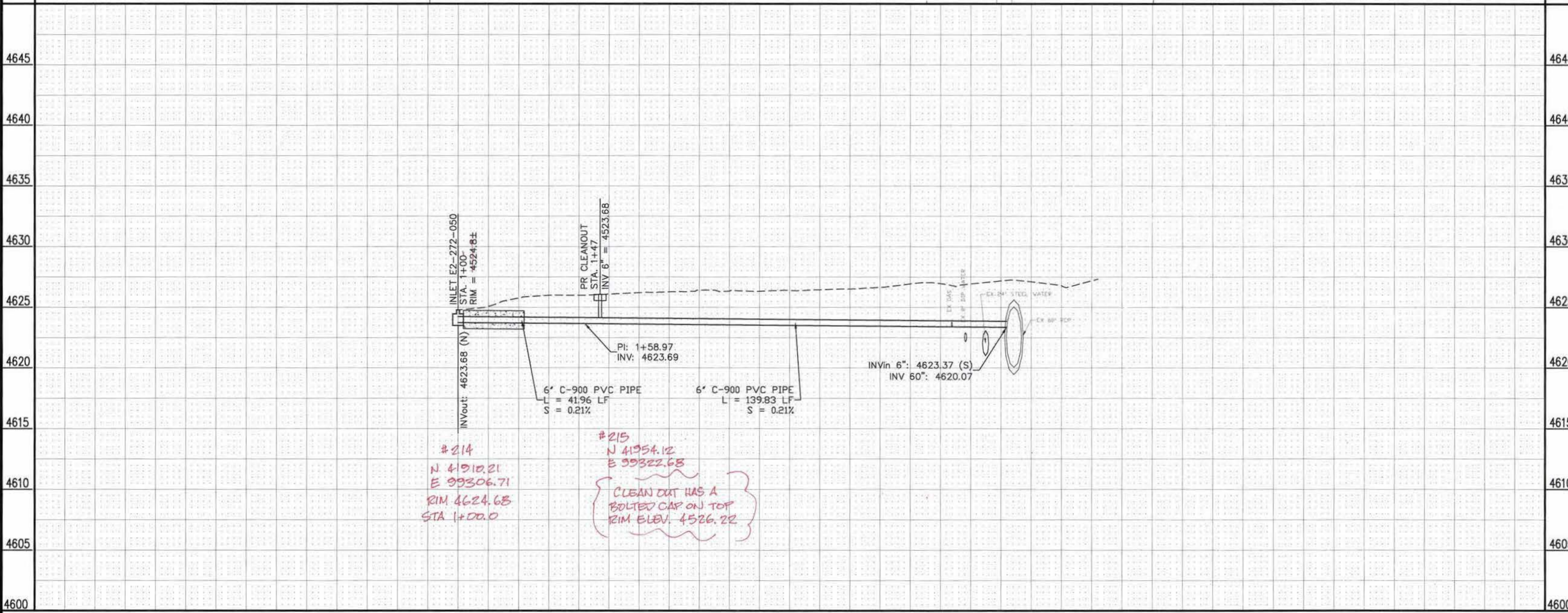
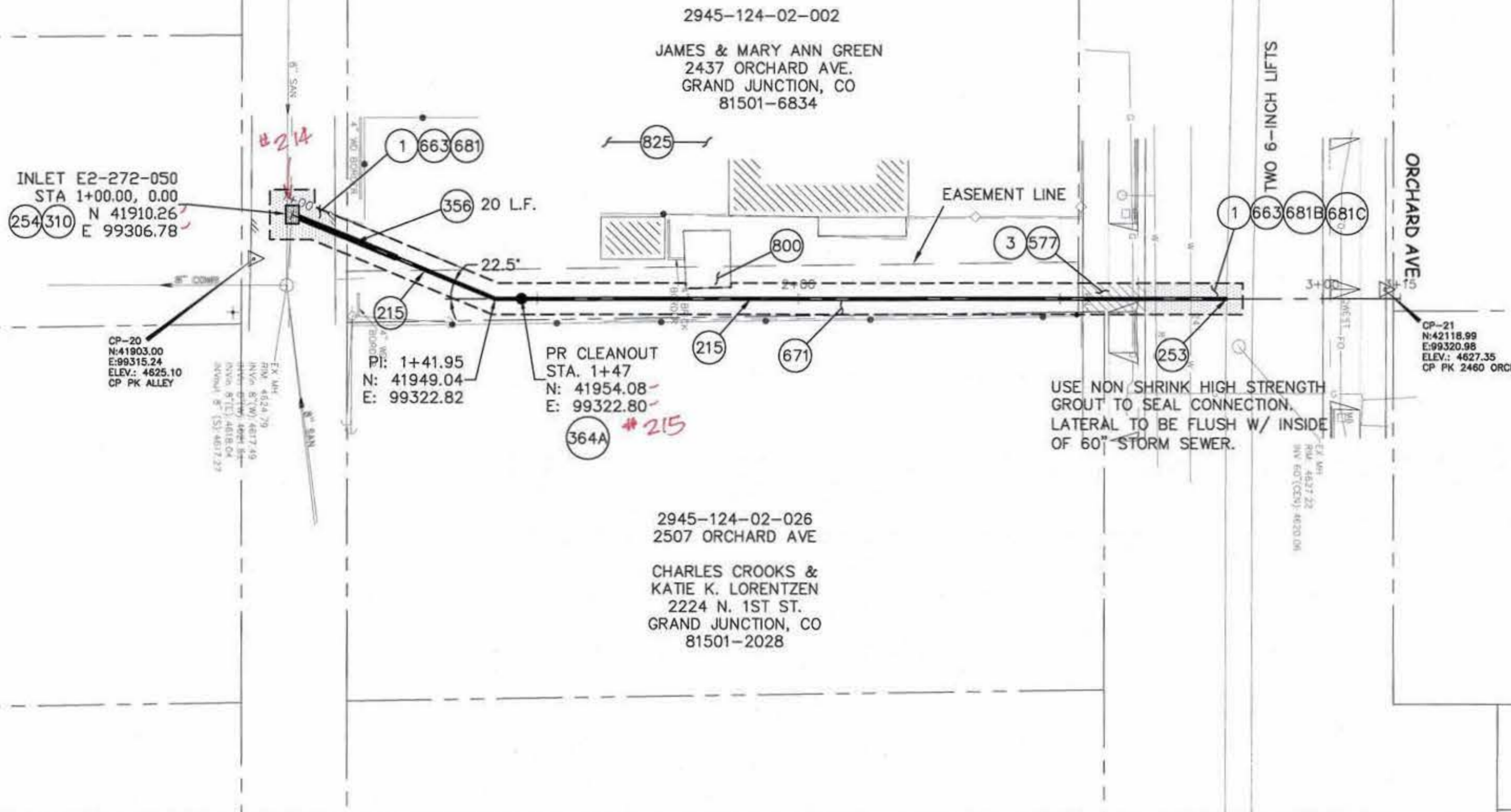
CITY OF  
**Grand Junction**  
COLORADO

**PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION**

**2008 SANITARY SEWER REPLACEMENTS  
YUCCA DR. & ACADIA DR. PLAN AND PROFILE 14  
STA 1+00 TO STA 2+50**

CONSTRUCTION NOTES

- 1 202 - REMOVAL AND REPLACEMENT OF ASPHALT MAT. CUT, REMOVE AND REPLACE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 215 102.10/108.2 - 6" STORM DRAIN PIPE (C-900 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 253 CONNECT NEW 6" C-900 PVC STORM TO EXISTING 60" STORM
- 254 102.14 - GROUT-SEAL HOLE OPENING IN MAHOLE, CATCH BASIN, OR PIPE STUB; DIA. 18 INCHES OR LESS.
- 310 102.11/108.5 - CONNECT TO EXISTING INLET (6" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).
- 356 104.40 - ENCASE 20± L.F. SEWER PIPE IN REINFORCED CONCRETE PER STD. DETAIL GU-04.
- 364A INSTALL STORM SEWER CLEANOUT, CLEANOUT RING & COVER AND CONCRETE COLLAR (SS-07).
- 577 608.06 - CONCRETE DRIVEWAY SECTION (6" THICK) (RESIDENTIAL)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 671 304 - WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. MATCH EXISTING TYPE. THICKNESS IS 2" MIN. AND 3" MAX.
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 681B 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (5" THICK) (GRADING SX, BINDER GRADE PG 64-22); ONE 3-INCH LIFT, ONE 2-INCH LIFT)
- 681C 401.08 - T-TOP PAVEMENT PATCHING: MILL/PLANE 2" DEEPX2' WIDE PERIMETER AROUND ASPHALT PATCH AREA, PLACE 2" LIFT HOT BITUMINOUS PAVEMENT (GRADING AND GRADE TO MATCH PATCH SPEC.) LIFT, INTERGRAL W/ FINAL 2" LIFT OF PATCHING HBP.
- 800 PROTECT CONCRETE FEATURE IN PLACE AS SHOWN.
- 825 CONTRACTOR IS RESPONSIBLE FOR REPAIR COSTS ASSOCIATED WITH ANY/ALL DAMAGE TO PRIVATE PROPERTY BEHIND ROW LINE OR EASEMENT LIMITS.

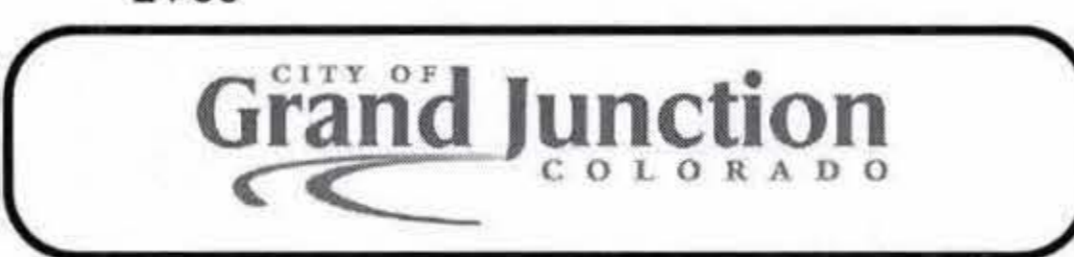
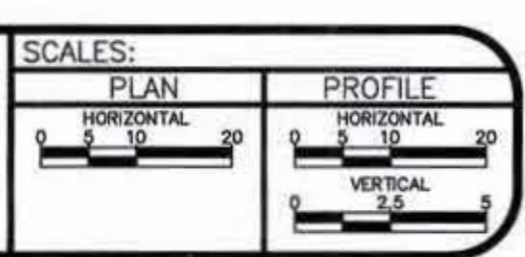


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N 41910.21  
E 99306.71  
RIM 4624.68  
STA 1+00.0

#215  
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E 99322.68  
CLEAN OUT HAS A BOLTED CAP ON TOP  
RIM ELEV. 4526.22

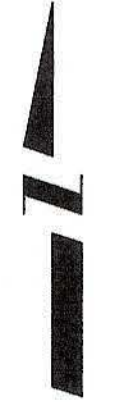
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DRAWN BY JAH DATE 2008  
DESIGNED BY DATE  
CHECKED BY DATE  
APPROVED BY DATE



PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION

2008 SANITARY SEWER REPLACEMENTS  
2437 ORCHARD AVENUE  
PLAN AND PROFILE STA 1+00 TO STA 3+00



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION			DESIGNED BY	DATE
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REVISION			APPROVED BY	DATE

SCALE  
N.T.S.



PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION

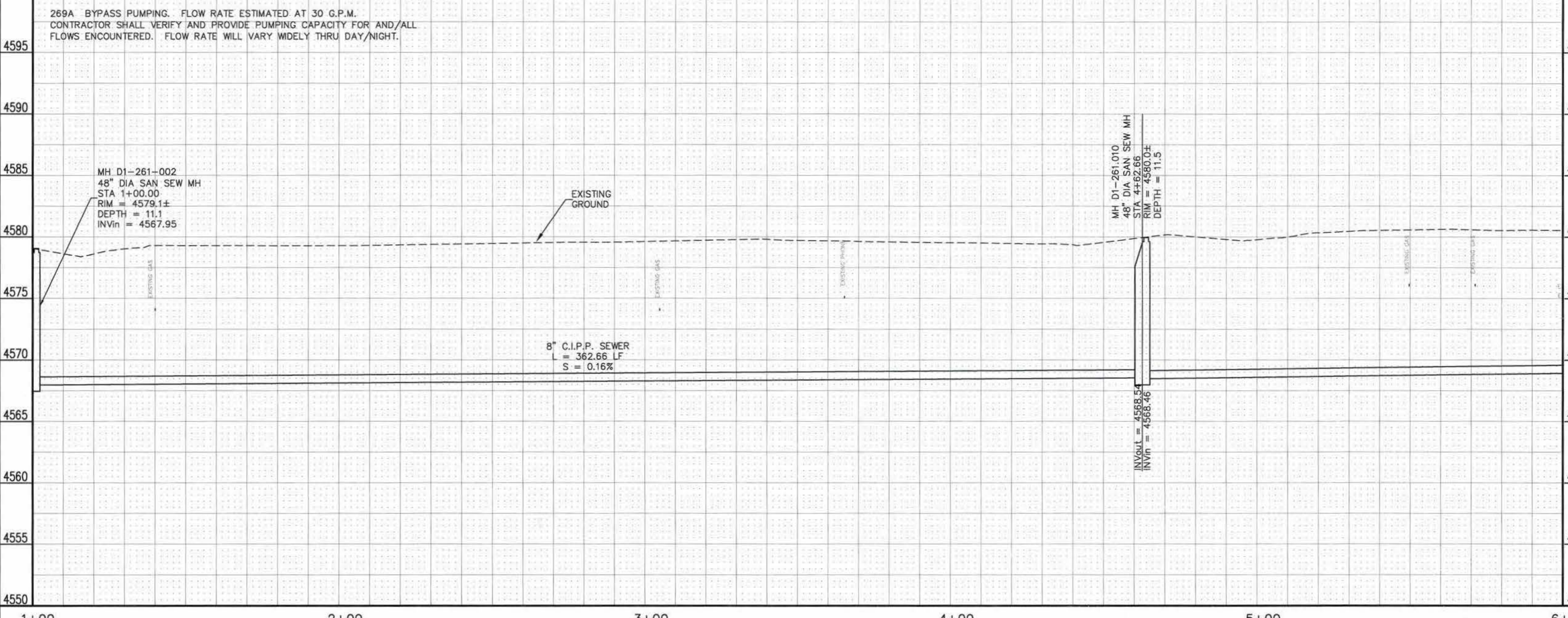
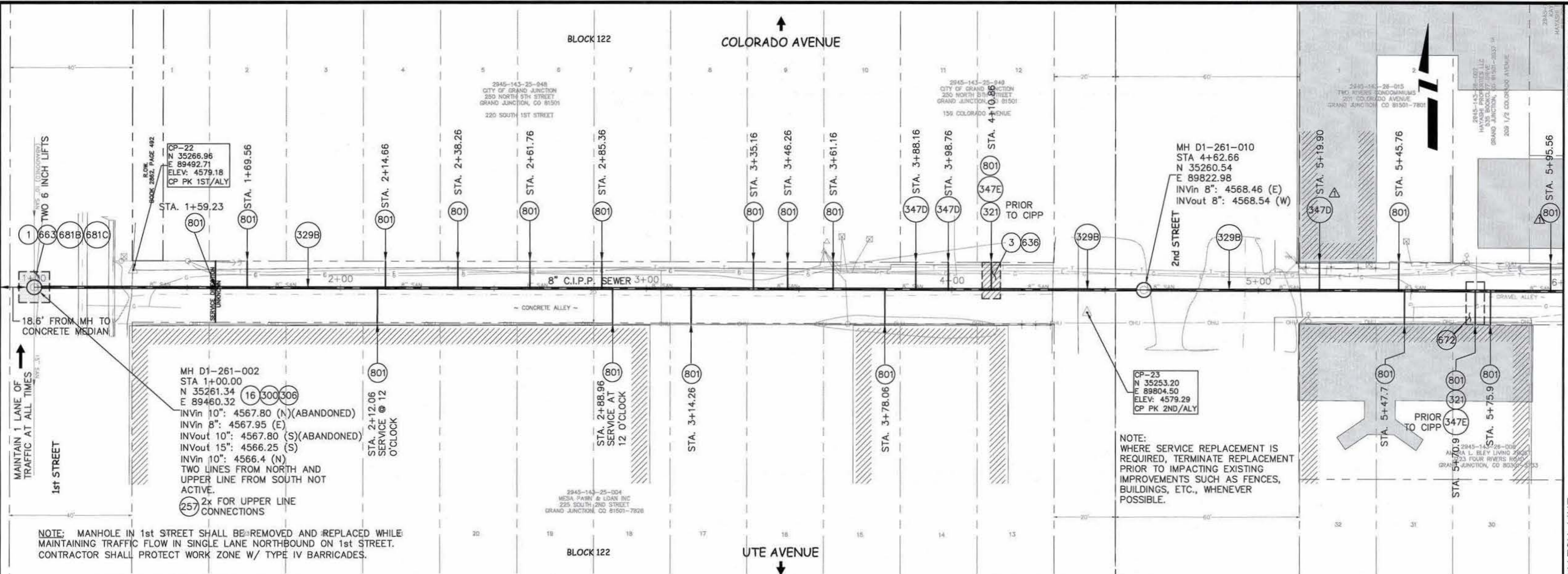
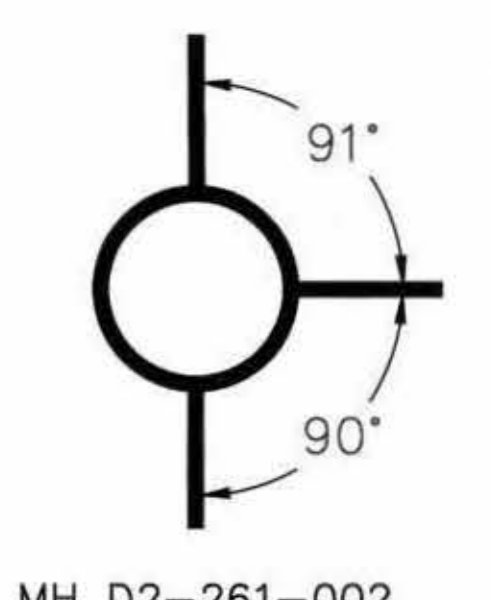
2009 SEWER REPLACEMENTS  
BYPASS PUMPING PLAN



CONSTRUCTION NOTES

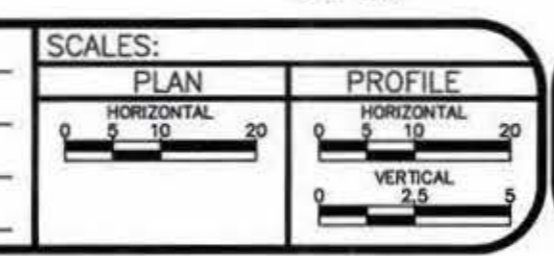
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 269A UU/108.2 - BYPASS PUMPING FOR ALL OPERATIONS ON SEWER IMPROVEMENTS IN COLORADO AVE./UTE AVE. ALLEY. BYPASS CONFIGURATION SHALL ALLOW CONTINUOUS TRAFFIC USAGE OF AFFECTED STREETS. CONTRACTOR SHALL INDEPENDENTLY VERIFY FLOW RATES.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 306 102.11/108.5 - MANHOLE BARREL SECTION (D>5") (48" I.D.).
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 329B 102.9/108.2 - 8-INCH CURED IN PLACE PIPE (CIPP); DESIGNED, SUBMITTED, AND STAMPED BY P.E.; INSTALLED BY CONTRACTOR OR SUBCONTRACTOR MEETING SPECIFICATIONS DEFINED IN CONTRACT DOCUMENTS. SEE SPECIAL PROVISIONS. DESIGN SHALL BE FOR EXISTING PIPE IN FULLY DETERIORATED CONDITION. CONTRACTOR SHALL VERIFY DIA. OF PIPE PRIOR TO DESIGN AND FABRICATION OF LINER.
- 347D 102.9/104.2/108.2 - CIPP TRENCHLESS SANITARY SEWER SERVICE CONNECTION (TOPHAT); 4" DIA SERVICE; MAIN DIA. VARIES.
- 347E 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP. NEW SERVICE ON EXISTING DEEP PIPE (DEPTH GREATER THAN 6 FEET) UNDERGOING TRENCHLESS REPAIR, TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP PRIOR TO CIPP INSTALLATION. NEW TAP SHALL BE (W/ APPROVAL OF ENGINEER OR INSPECTOR ON CASE-SPECIFIC BASIS): FULL BODY WYE W/ STREET 45 (PIPE STUBS AND COUPLINGS INCLUDED), INSERTA-TEE, OR SADDLE; ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).

- 636 608 - CONCRETE PAVEMENT PATCH, 8" THICK, 6" CLASS 6 A.B.C., INCLUDES DOWELS AS PER STD. DETAIL IN STD. CONTRACT DOCUMENTS.
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)
- 681B 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (5" THICK) (GRADING SX, BINDER GRADE PG 64-22); ONE 3-INCH LIFT, ONE 2-INCH LIFT
- 681C 401.08 - T-TOP PAVEMENT PATCHING: MILL/PLANE 2" DEEPX2' WIDE PERIMETER AROUND ASPHALT PATCH AREA, PLACE 2" LIFT HOT BITUMINOUS PAVEMENT (GRADING AND GRADE TO MATCH PATCH SPEC.) LIFT, INTERGRAL W/ FINAL 2" LIFT OF PATCHING HBP.
- 801 REMOVE CIPP COUPON AT SERVICE CONNECTION (INCIDENTAL TO 329B)



REVISION	DESCRIPTION	DATE

DRAWN BY JAH DATE 01/2009  
 DESIGNED BY DD DATE 01/2009  
 CHECKED BY DATE  
 APPROVED BY DATE

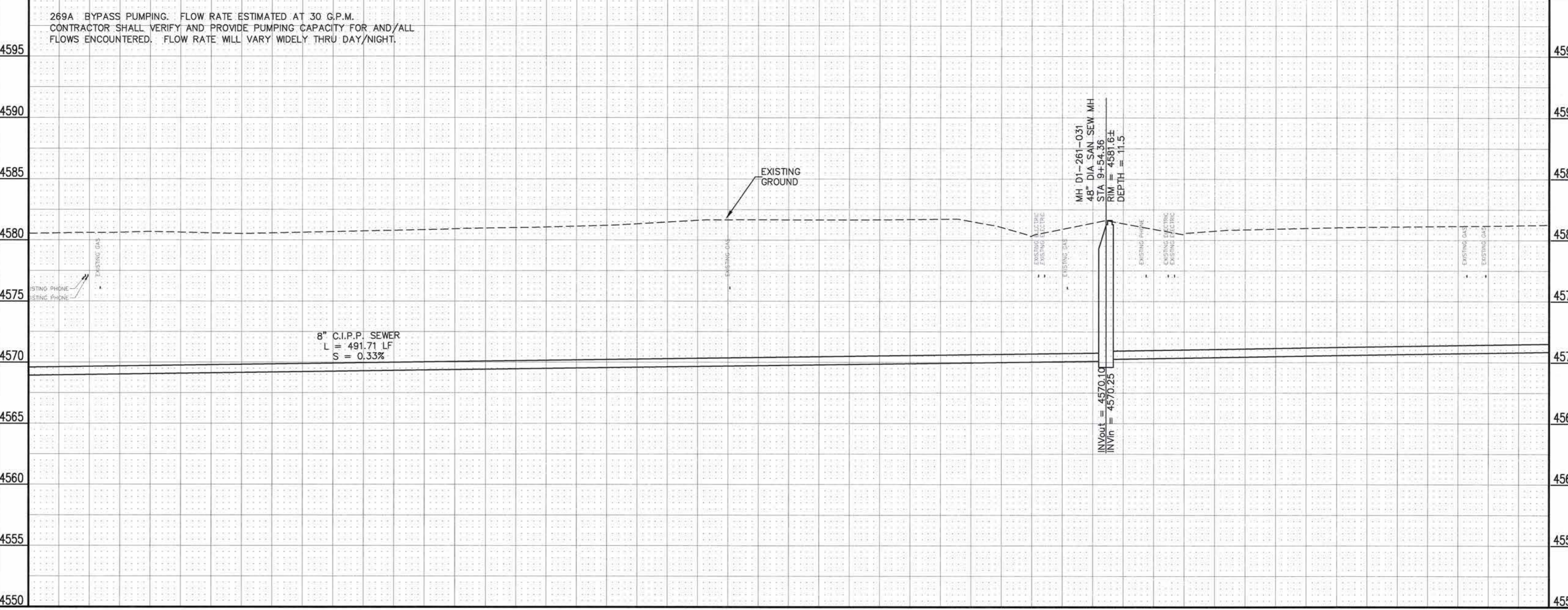
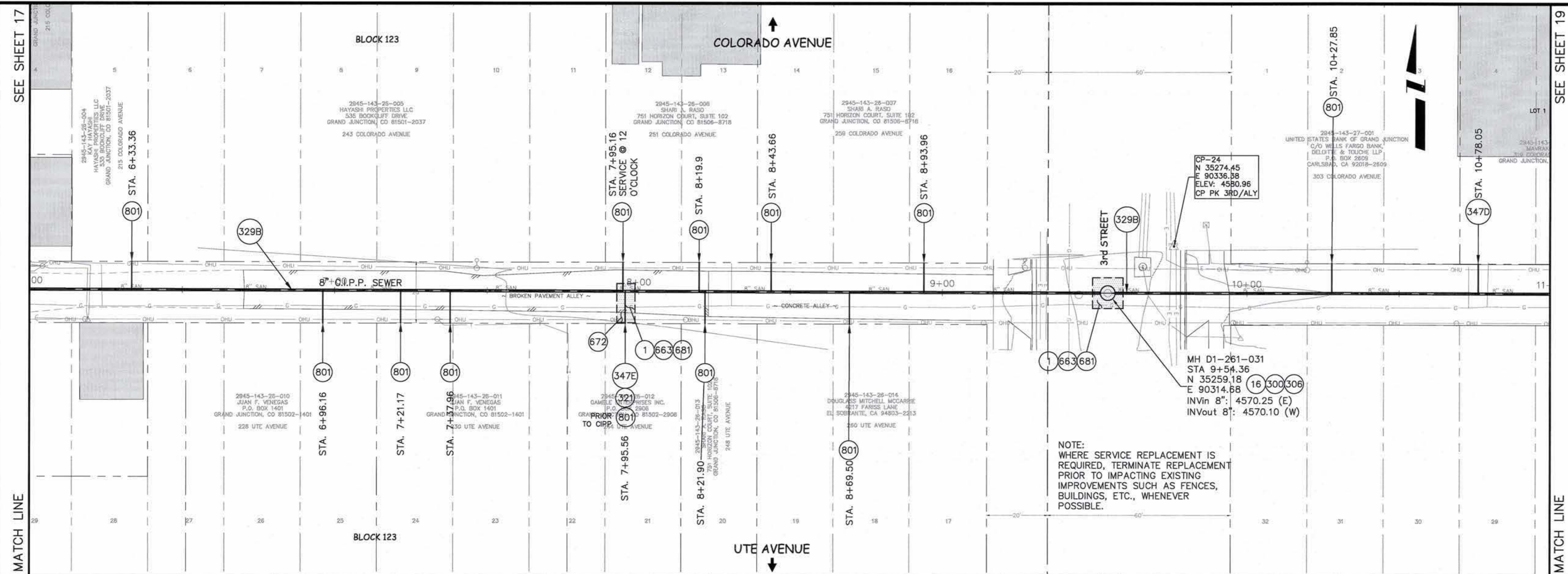
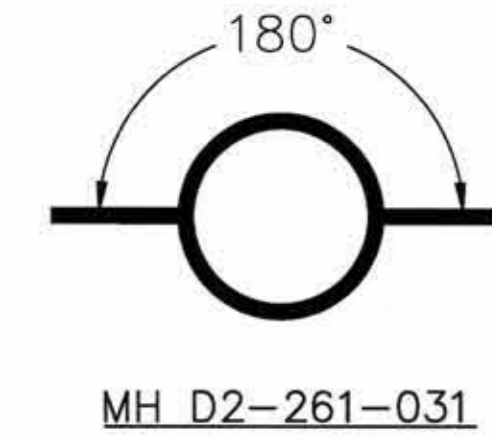


**PUBLIC WORKS  
 AND UTILITIES  
 ENGINEERING DIVISION**

**2009 SEWER REPLACEMENTS  
 SANITARY SEWER PLAN AND PROFILE  
 COLORADO AVE./UTE AVE. 1st ST. TO 7th ST. STA. 1+00 TO STA. 6+00**

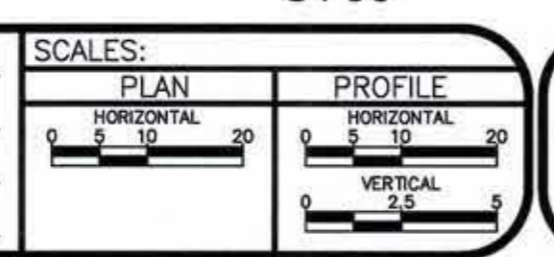
CONSTRUCTION NOTES

- ① 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- ③ 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- ①6 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- ②69A UU/108.2 - BYPASS PUMPING FOR ALL OPERATIONS ON SEWER IMPROVEMENTS IN COLORADO AVE./UTE AVE. ALLEY. BYPASS CONFIGURATION SHALL ALLOW CONTINUOUS TRAFFIC USAGE OF AFFECTED STREETS. CONTRACTOR SHALL INDEPENDENTLY VERIFY FLOW RATES.
- ③00 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- ③06 102.11/108.5 - MANHOLE BARREL SECTION (D>5") (48" I.D.).
- ③21 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- ③29B 102.9/108.2 - 8-INCH CURED IN PLACE PIPE (CIPP); DESIGNED, SUBMITTED, AND STAMPED BY P.E.; INSTALLED BY CONTRACTOR OR SUBCONTRACTOR MEETING SPECIFICATIONS DEFINED IN CONTRACT DOCUMENTS. SEE SPECIAL PROVISIONS. DESIGN SHALL BE FOR EXISTING PIPE IN FULLY DETERIORATED CONDITION. CONTRACTOR SHALL VERIFY DIA. OF PIPE PRIOR TO DESIGN AND FABRICATION OF LINER.
- ③47D 102.9/104.2/108.2 - CIPP TRENCHLESS SANITARY SEWER SERVICE CONNECTION (TOPHAT); 4" DIA SERVICE; MAIN DIA. VARIES.
- ③47E 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP. NEW SERVICE ON EXISTING DEEP PIPE (DEPTH GREATER THAN 6 FEET) UNDERGOING TRENCHLESS REPAIR. TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP PRIOR TO CIPP INSTALLATION. NEW TAP SHALL BE (W/ APPROVAL OF ENGINEER OR INSPECTOR ON CASE-SPECIFIC BASIS): FULL BODY WYE W/ STREET 45 (PIPE STUBS AND COUPLINGS INCLUDED), INSERTA-TEE, OR SADDLE; ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- ③36 608 - CONCRETE PAVEMENT PATCH, 8" THICK, 6" CLASS 6 A.B.C., INCLUDES DOWELS AS PER STD. DETAIL IN STD. CONTRACT DOCUMENTS.
- ③63 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- ③72 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)
- ③81 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- ③01 REMOVE CIPP COUPON AT SERVICE CONNECTION (INCIDENTAL TO 329B)



REVISION	DESCRIPTION	DATE

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DESIGNED BY	DD	DATE	01/2009
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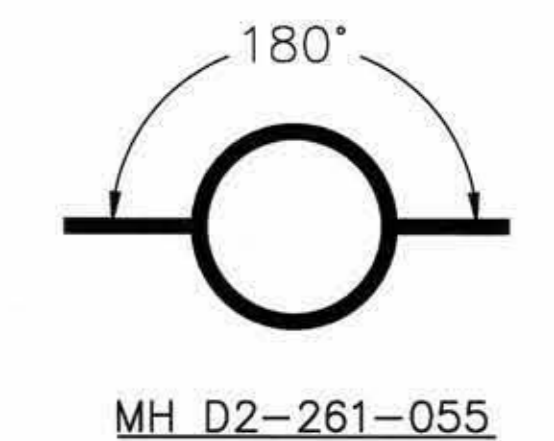


**PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION**

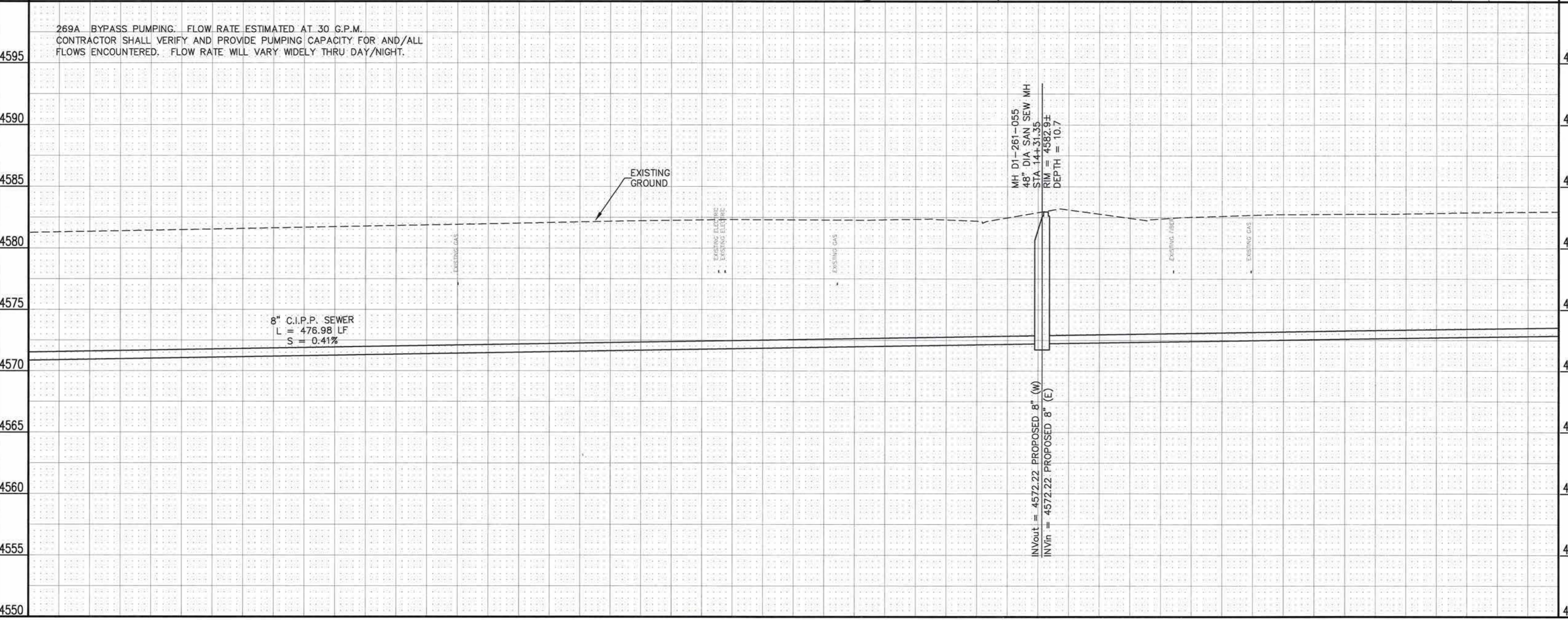
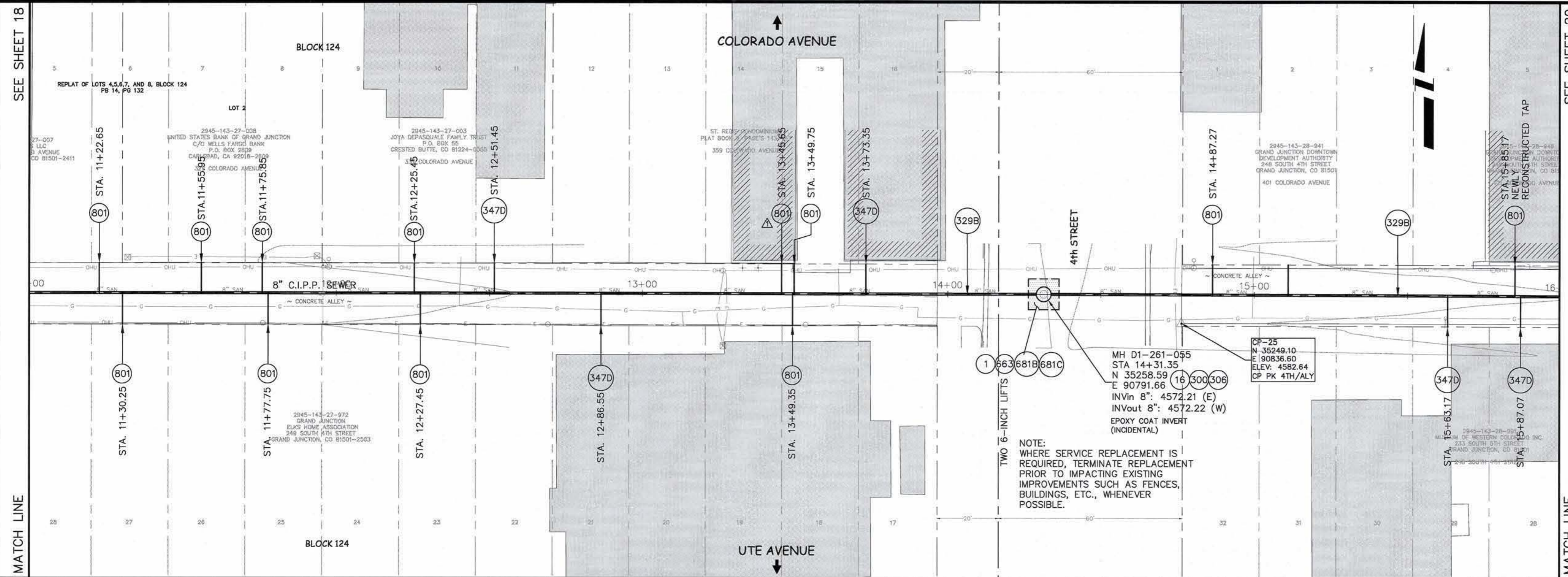
**2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE**  
COLORADO AVE./UTE AVE. 1st ST. TO 7th ST. STA. 6+00 TO STA. 11+00

CONSTRUCTION NOTES

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 269A UU/108.2 - BYPASS PUMPING FOR ALL OPERATIONS ON SEWER IMPROVEMENTS IN COLORADO AVE./UTE AVE. ALLEY. BYPASS CONFIGURATION SHALL ALLOW CONTINUOUS TRAFFIC USAGE OF AFFECTED STREETS. CONTRACTOR SHALL INDEPENDENTLY VERIFY FLOW RATES.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 306 102.11/108.5 - MANHOLE BARREL SECTION (D>5") (48" I.D.).
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 329B 102.9/108.2 - 8-INCH CURED IN PLACE PIPE (CIPP); DESIGNED, SUBMITTED, AND STAMPED BY P.E.; INSTALLED BY CONTRACTOR OR SUBCONTRACTOR MEETING SPECIFICATIONS DEFINED IN CONTRACT DOCUMENTS. SEE SPECIAL PROVISIONS. DESIGN SHALL BE FOR EXISTING PIPE IN FULLY DETERIORATED CONDITION. CONTRACTOR SHALL VERIFY DIA. OF PIPE PRIOR TO DESIGN AND FABRICATION OF LINER.
- 347C 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON EXISTING PIPE UNDERGOING TRENCHLESS REPAIR). TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP. NEW TAP SHALL BE (W/ APPROVAL OF ENGINEER OR INSPECTOR ON CASE-SPECIFIC BASIS): FULL BODY WYE W/ STREET 45 (PIPE STUBS AND COUPLINGS INCLUDED), INSERT-A-TEE, OR SADDLE; ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 347D 102.9/104.2/108.2 - CIPP TRENCHLESS SANITARY SEWER SERVICE CONNECTION (TOPHAT); 4" DIA SERVICE; MAIN DIA. VARIES.
- 636 608 - CONCRETE PAVEMENT PATCH, 8" THICK, 6" CLASS 6 A.B.C., INCLUDES DOWELS AS PER STD. DETAIL IN STD. CONTRACT DOCUMENTS.
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 681B 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (5" THICK) (GRADING SX, BINDER GRADE PG 64-22); ONE 3-INCH LIFT, ONE 2-INCH LIFT)
- 681C 401.08 - T-TOP PAVEMENT PATCHING: MILL/PLANE 2" DEEPX2' WIDE PERIMETER AROUND ASPHALT PATCH AREA, PLACE 2" LIFT HOT BITUMINOUS PAVEMENT (GRADING AND GRADE TO MATCH PATCH SPEC.) LIFT, INTEGRAL W/ FINAL 2" LIFT OF PATCHING HBP.



NOTE: REACH BETWEEN MH D1-261-055 AND MH D1-261-031 SHALL ONLY BE LINED BETWEEN HOURS OF 1am SUNDAY AND 8am MONDAY UNLESS WRITTEN APPROVAL FROM HOTEL COLORADO (ST. REGIS, 359 COLORADO AVE.) IS PROVIDED 5 DAYS PRIOR TO WORK. ALL OTHER SPECIFICATIONS IN BID AND PROJECT DOCUMENTS ARE APPLICABLE.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
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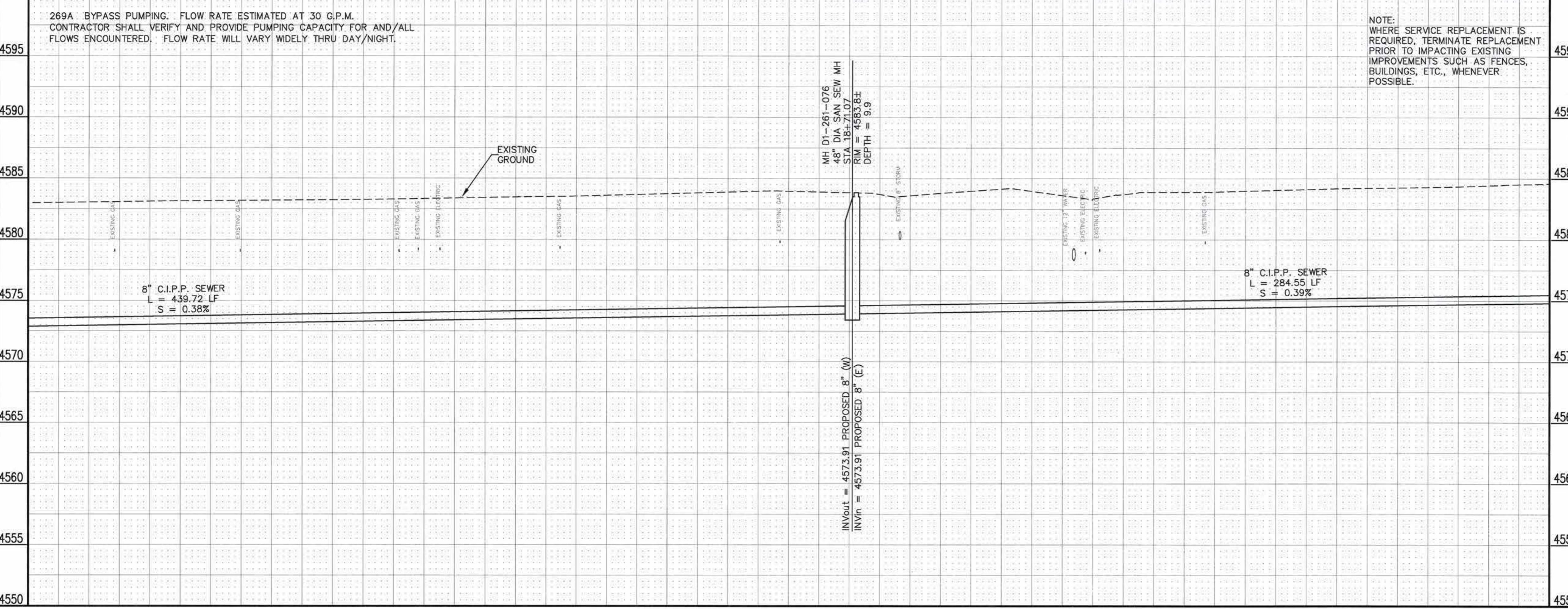
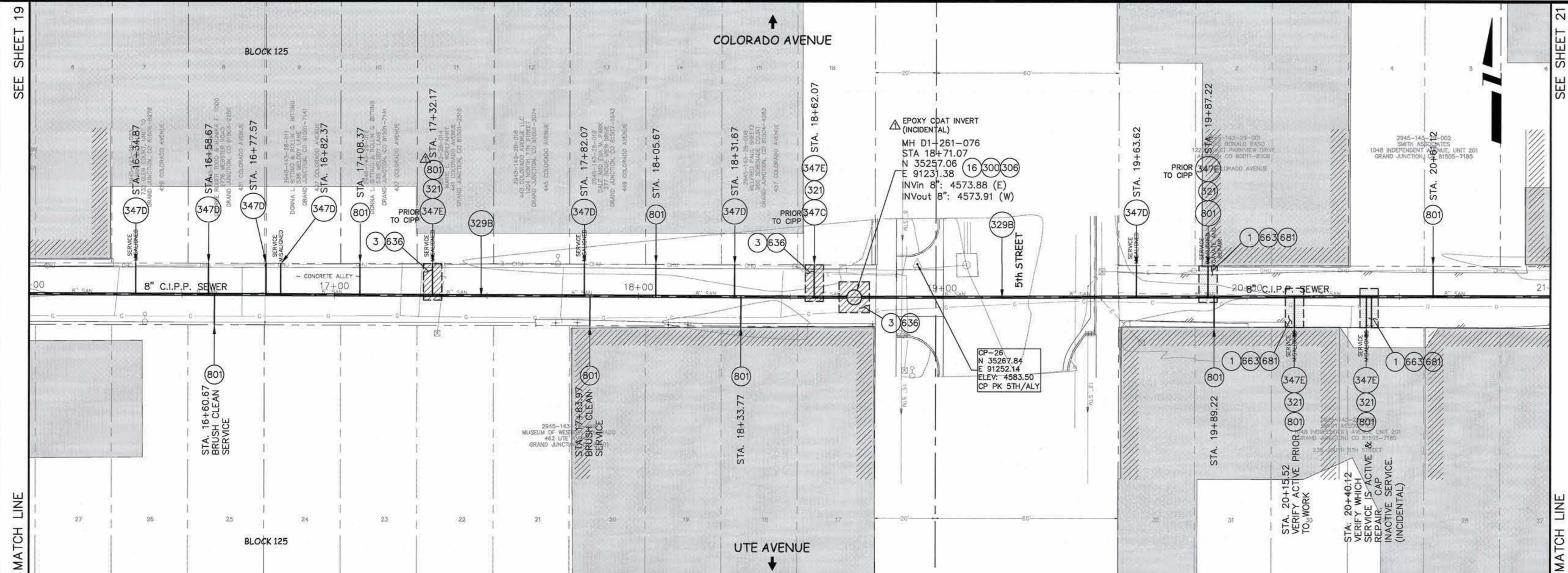
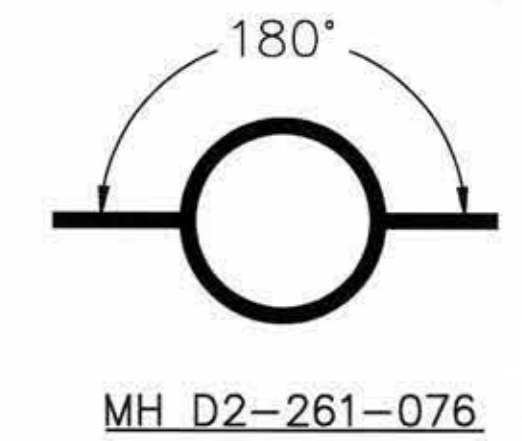
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PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

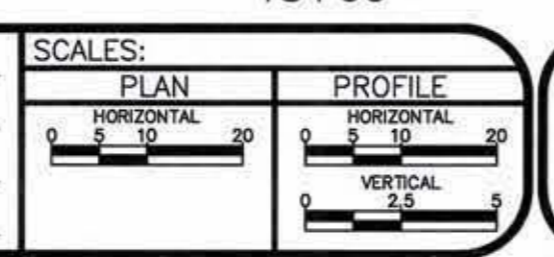
2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
COLORADO AVE./UTE AVE. 1st ST. TO 7th ST. STA. 11+00 TO STA. 16+00

CONSTRUCTION NOTES

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- 329B 102.9/108.2 - 8-INCH CURED IN PLACE PIPE (CIPP); DESIGNED, SUBMITTED, AND STAMPED BY P.E.; INSTALLED BY CONTRACTOR OR SUBCONTRACTOR MEETING SPECIFICATIONS DEFINED IN CONTRACT DOCUMENTS. SEE SPECIAL PROVISIONS. DESIGN SHALL BE FOR EXISTING PIPE IN FULLY DETERIORATED CONDITION. CONTRACTOR SHALL VERIFY DIA. OF PIPE PRIOR TO DESIGN AND FABRICATION OF LINER.
- 347D 102.9/104.2/108.2 - CIPP TRENCHLESS SANITARY SEWER SERVICE CONNECTION (TOPHAT); 4" DIA SERVICE; MAIN DIA. VARIES.
- 347E 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP. NEW SERVICE ON EXISTING DEEP PIPE (DEPTH GREATER THAN 6 FEET) UNDERGOING TRENCHLESS REPAIR. TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP PRIOR TO CIPP INSTALLATION. NEW TAP SHALL BE (W/ APPROVAL OF ENGINEER OR INSPECTOR ON CASE-SPECIFIC BASIS): FULL BODY WYE, W/ STREET 45 (PIPE STUBS AND COUPLINGS INCLUDED), INSERTA-TEE, OR SADDLE; ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE 'Y' CONNECTION" SS-06 AND SS-07).
- 636 608 - CONCRETE PAVEMENT PATCH, 8" THICK, 6" CLASS 6 A.B.C., INCLUDES DOWELS AS PER STD. DETAIL IN STD. CONTRACT DOCUMENTS.
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 801 REMOVE CIPP COUPON AT SERVICE CONNECTION (INCIDENTAL TO 329B)



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
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2			DD	01/2009
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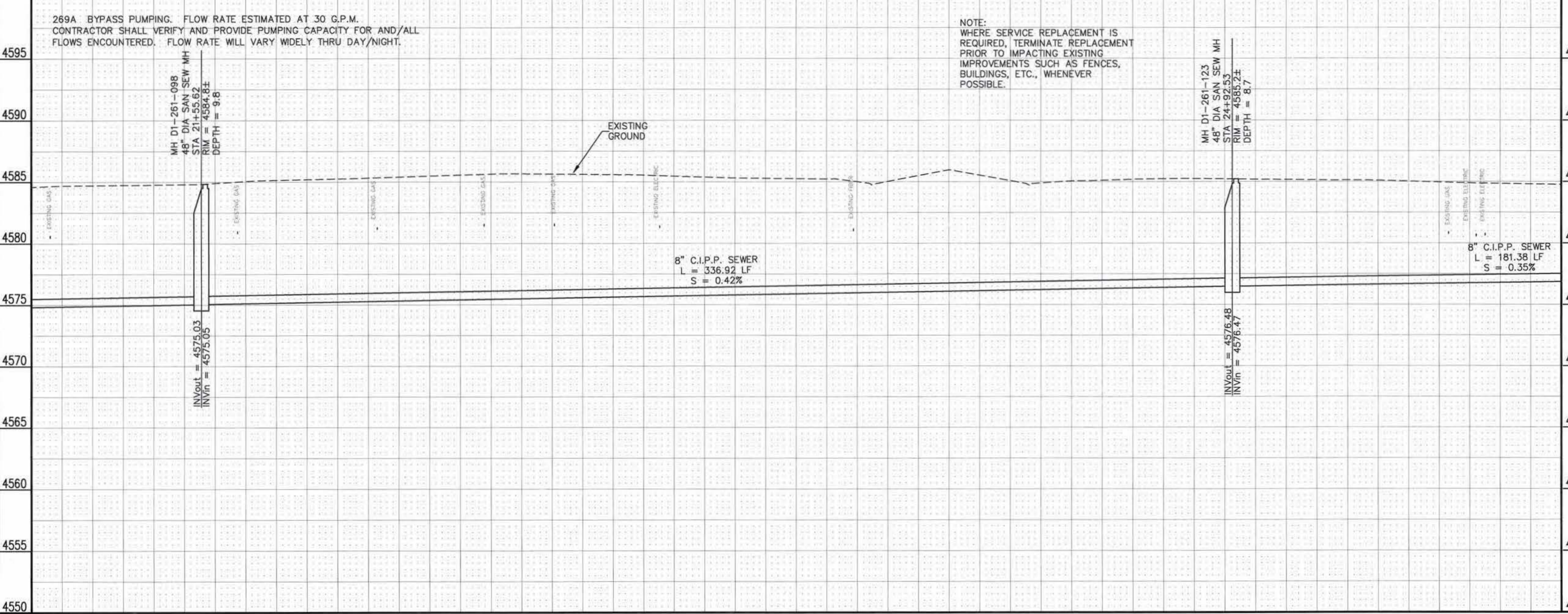
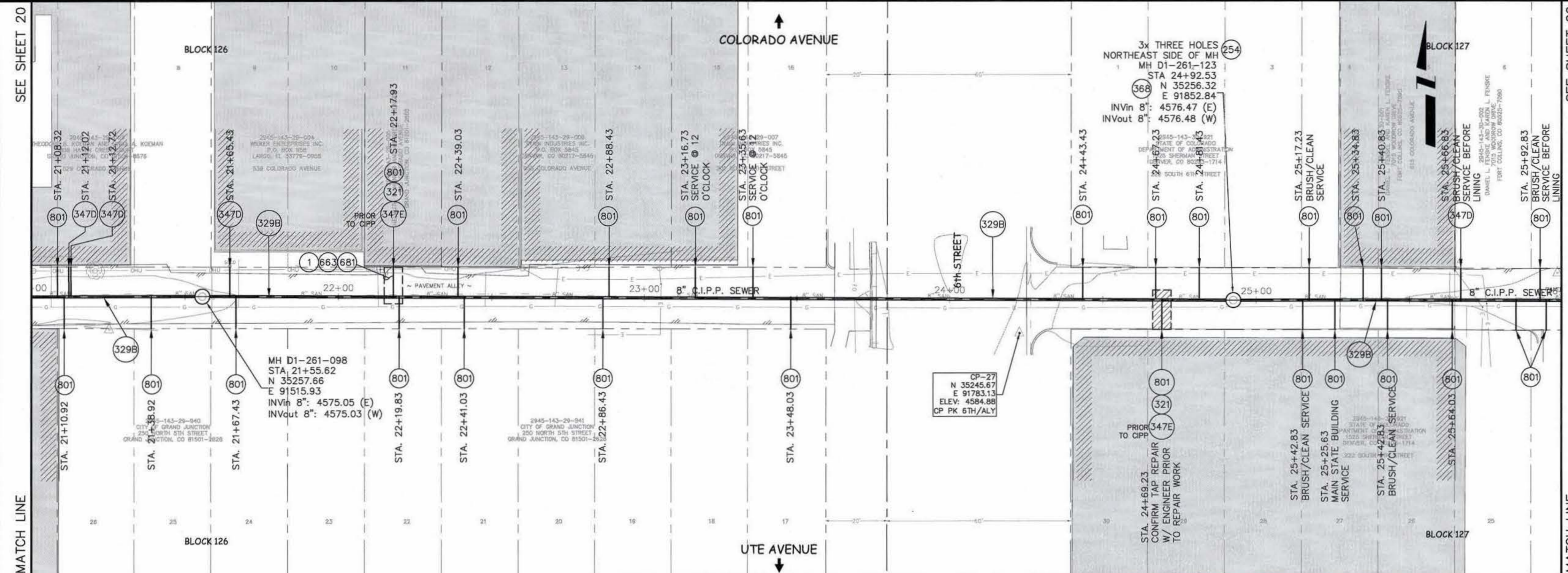


PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
COLORADO AVE./UTE AVE. 1st ST. TO 7th ST. STA. 16+00 TO STA. 21+00

CONSTRUCTION NOTES

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 254 102.14 - GROUT-SEAL HOLE OPENING IN MAHOLE, CATCH BASIN, OR PIPE STUB; DIA. 18 INCHES OR LESS.
- 269A UU/108.2 - BYPASS PUMPING FOR ALL OPERATIONS ON SEWER IMPROVEMENTS IN COLORADO AVE./UTE AVE. ALLEY. BYPASS CONFIGURATION SHALL ALLOW CONTINUOUS TRAFFIC USAGE OF AFFECTED STREETS. CONTRACTOR SHALL INDEPENDENTLY VERIFY FLOW RATES.
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 329B 102.9/108.2 - 8-INCH CURED IN PLACE PIPE (CIPP); DESIGNED, SUBMITTED, AND STAMPED BY P.E.; INSTALLED BY CONTRACTOR OR SUBCONTRACTOR MEETING SPECIFICATIONS DEFINED IN CONTRACT DOCUMENTS. SEE SPECIAL PROVISIONS. DESIGN SHALL BE FOR EXISTING PIPE IN FULLY DETERIORATED CONDITION. CONTRACTOR SHALL VERIFY DIA. OF PIPE PRIOR TO DESIGN AND FABRICATION OF LINER.
- 347D 102.9/104.2/108.2 - CIPP TRENCHLESS SANITARY SEWER SERVICE CONNECTION (TOPHAT); 4" DIA SERVICE; MAIN DIA. VARIES.
- 347E 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP. NEW SERVICE ON EXISTING DEEP PIPE (DEPTH GREATER THAN 6 FEET) UNDERGOING TRENCHLESS REPAIR. TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP PRIOR TO CIPP INSTALLATION. NEW TAP SHALL BE (W/ APPROVAL OF ENGINEER OR INSPECTOR ON CASE-SPECIFIC BASIS); FULL BODY WYE W/ STREET 45 (PIPE STUBS AND COUPLINGS INCLUDED), INSERTA-TEE, OR SADDLE; ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 366 102.11/102.14/108.2 - RECONDITION EXISTING MANHOLE BENCH. REMOVE DETERIORATED CONCRETE ON BENCH AND AROUND BASE USING ACID ETCH OR CHIPHAMMERING; CLEAN AND REMOVE DEBRIS; SATURATE SURFACE WITH ACRYLIC FORTIFIER; ADD ZYPLEX C-500 TO GROUT (GROUT MIX AS PER UU SPECS.) AT 3% PER WEIGHT OF CEMENTITIOUS MATERIAL. APPLY EPOXY COATING (MEETING UU SPECS) AFTER GROUT HAS CURED. ANY BYPASS PUMPING SHALL BE INCIDENTAL.
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 801 REMOVE CIPP COUPON AT SERVICE CONNECTION (INCIDENTAL TO 329B)



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			JAH	01/2009
2			DD	01/2009
3				
4				

SCALES:

PLAN: 1" = 20'

PROFILE: HORIZONTAL 1" = 20', VERTICAL 1" = 5'

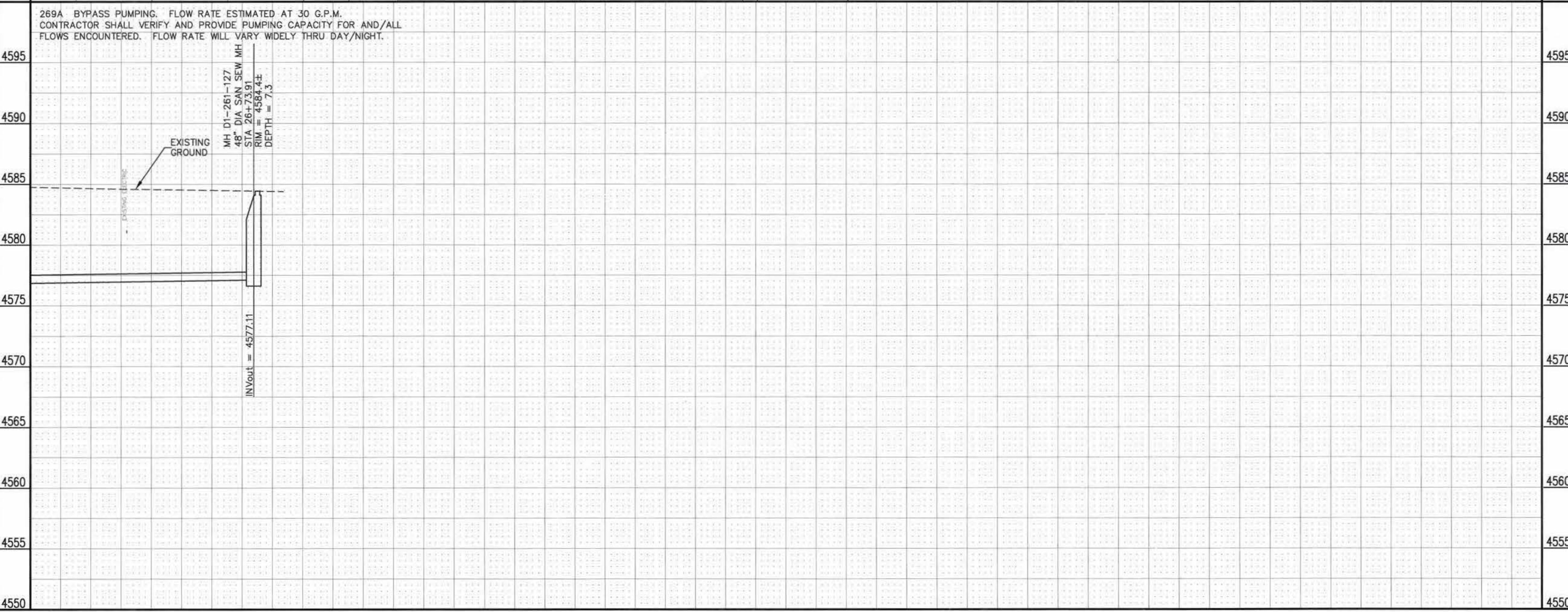
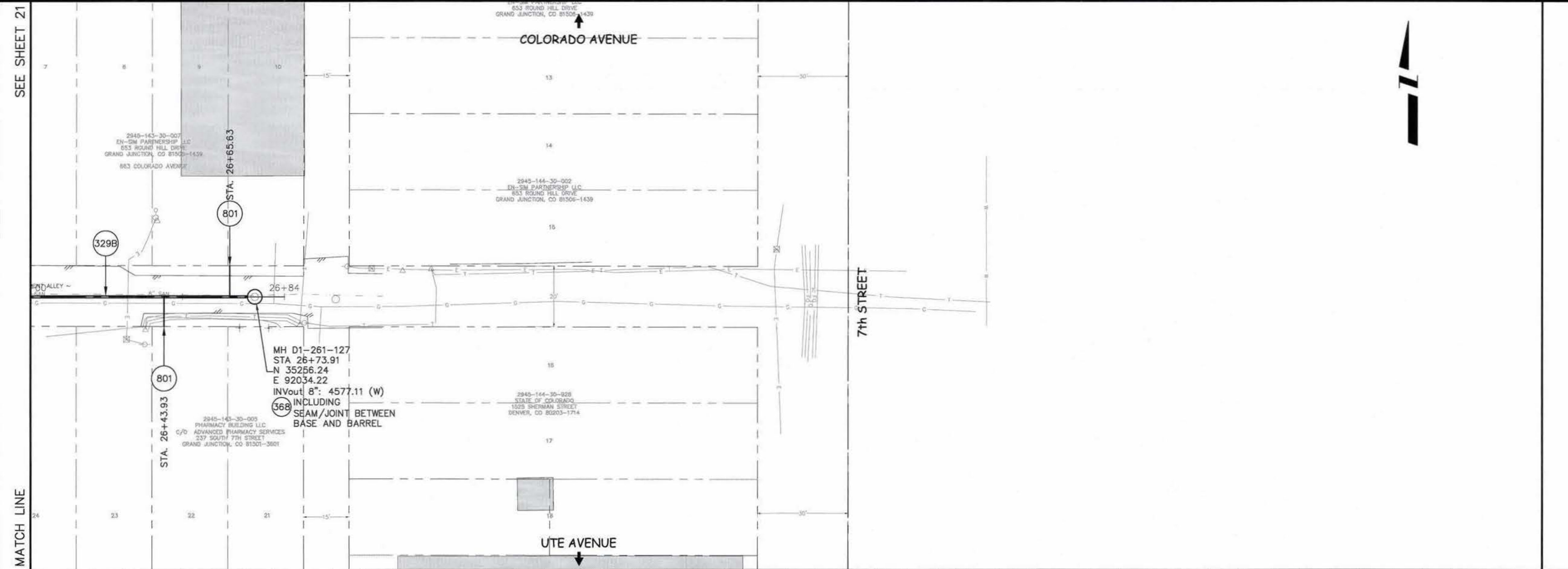
CITY OF Grand Junction COLORADO

PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
COLORADO AVE./UTE AVE. 1st ST. TO 7th ST. STA. 21+00 TO STA. 26+00

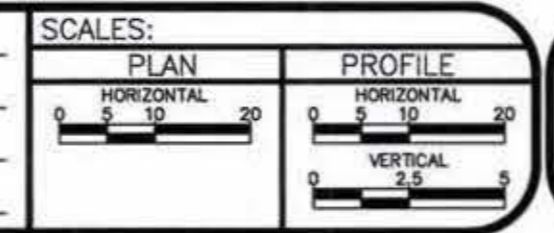
CONSTRUCTION NOTES

- 269A UU/108.2 - BYPASS PUMPING FOR ALL OPERATIONS ON SEWER IMPROVEMENTS IN COLORADO AVE./UTE AVE. ALLEY. BYPASS CONFIGURATION SHALL ALLOW CONTINUOUS TRAFFIC USAGE OF AFFECTED STREETS. CONTRACTOR SHALL INDEPENDENTLY VERIFY FLOW RATES.
- 329B 102.9/108.2 - 8-INCH CURED IN PLACE PIPE (CIPP); DESIGNED, SUBMITTED, AND STAMPED BY P.E.; INSTALLED BY CONTRACTOR OR SUBCONTRACTOR MEETING SPECIFICATIONS DEFINED IN CONTRACT DOCUMENTS. SEE SPECIAL PROVISIONS. DESIGN SHALL BE FOR EXISTING PIPE IN FULLY DETERIORATED CONDITION. CONTRACTOR SHALL VERIFY DIA. OF PIPE PRIOR TO DESIGN AND FABRICATION OF LINER.
- 368 102.11/102.14/108.2 - RECONDITION EXISTING MANHOLE BENCH. REMOVE DETERIORATED CONCRETE ON BENCH AND AROUND BASE USING ACID ETCH OR CHIPHAMMERING; CLEAN AND REMOVE DEBRIS; SATURATE SURFACE WITH ACRYLIC FORTIFIER; ADD ZYPEX C-500 TO GROUT (GROUT MIX AS PER UU SPECS.) AT 3% PER WEIGHT OF CEMENTITIOUS MATERIAL. APPLY EPOXY COATING (MEETING UU SPECS) AFTER GROUT HAS CURED. ANY BYPASS PUMPING SHALL BE INCIDENTAL.
- 801 REMOVE CIPP COUPON AT SERVICE CONNECTION (INCIDENTAL TO 329B)



269A BYPASS PUMPING. FLOW RATE ESTIMATED AT 30 G.P.M. CONTRACTOR SHALL VERIFY AND PROVIDE PUMPING CAPACITY FOR AND/ALL FLOWS ENCOUNTERED. FLOW RATE WILL VARY WIDELY THRU DAY/NIGHT.

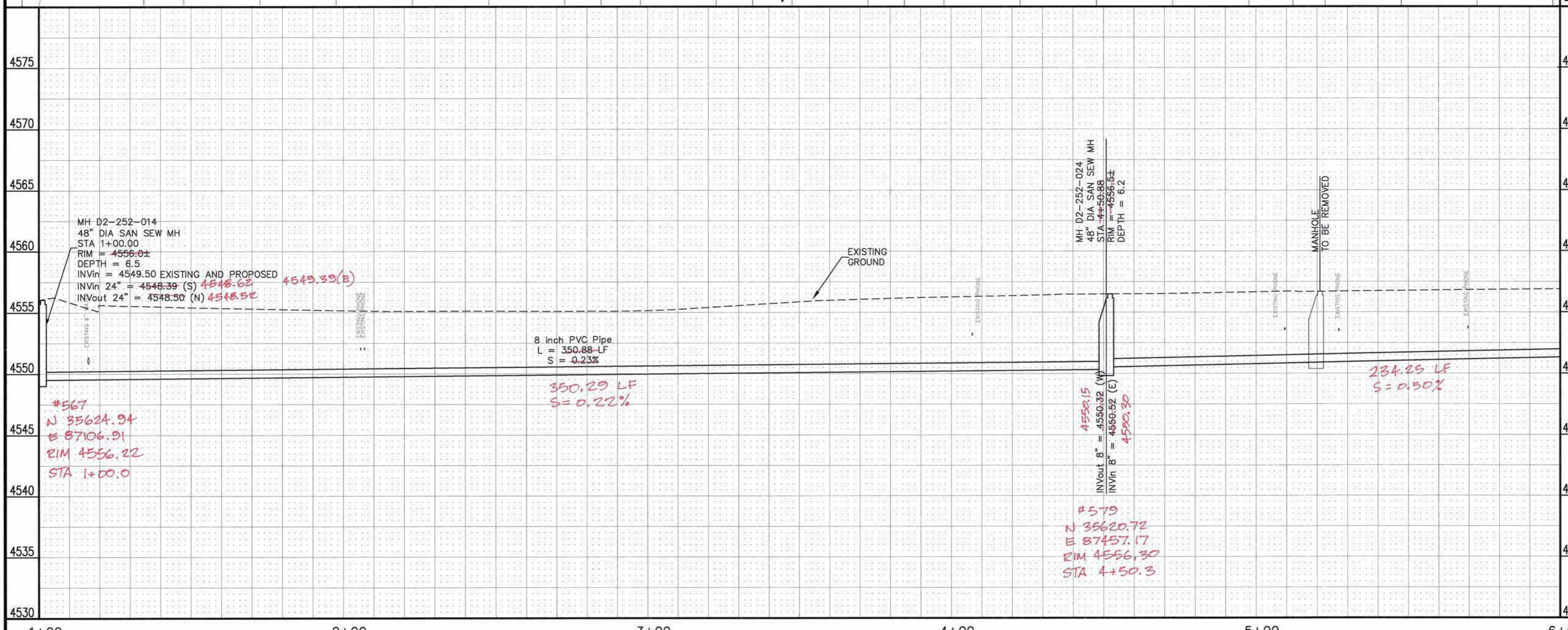
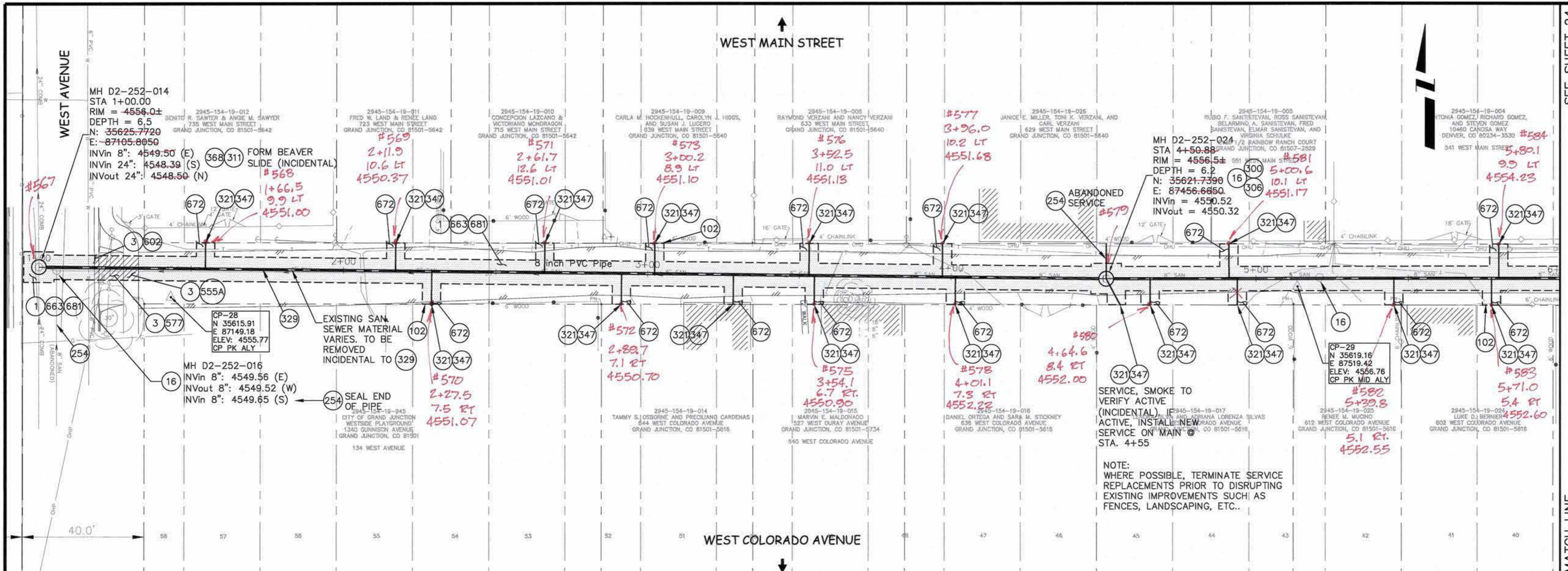
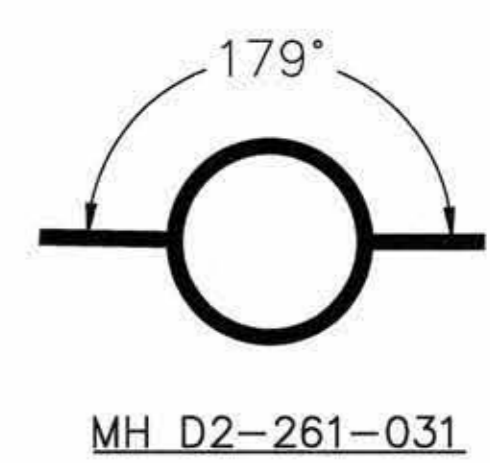
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REVISION			DD	01/2009
REVISION				
REVISION				



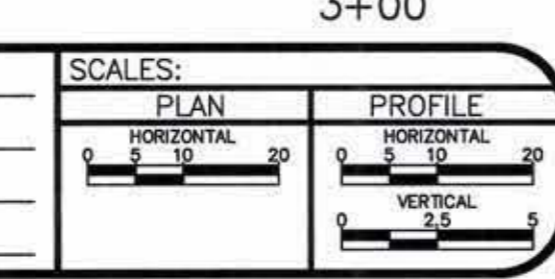
**PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION**

**2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
COLORADO AVE./UTE AVE. 1st ST. TO 7th ST. STA. 26+00 TO STA. 27+00**

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 102 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 254 102.14 - GROUT-SEAL HOLE OPENING IN MAHOLE, CATCH BASIN, OR PIPE STUB; DIA. 18 INCHES OR LESS.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 306 102.11/108.5 - MANHOLE BARREL SECTION (D>5") (48" I.D.).
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE (6" OR 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 347 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE Y" CONNECTION" SS-06 AND SS-07).
- 368 RECONDITION EXISTING MANHOLE BENCH.
- 555A 608.06 - CONCRETE SIDEWALK (8" THICK)
- 577 608.06 - CONCRETE DRIVEWAY SECTION (6" THICK) (RESIDENTIAL)
- 602 608.06 - CONCRETE CURB AND GUTTER (2' WIDE)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1/2" LIFTS)



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION			JAH	01/2009
REVISION			DD	01/2009
REVISION				
REVISION				



**PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION**

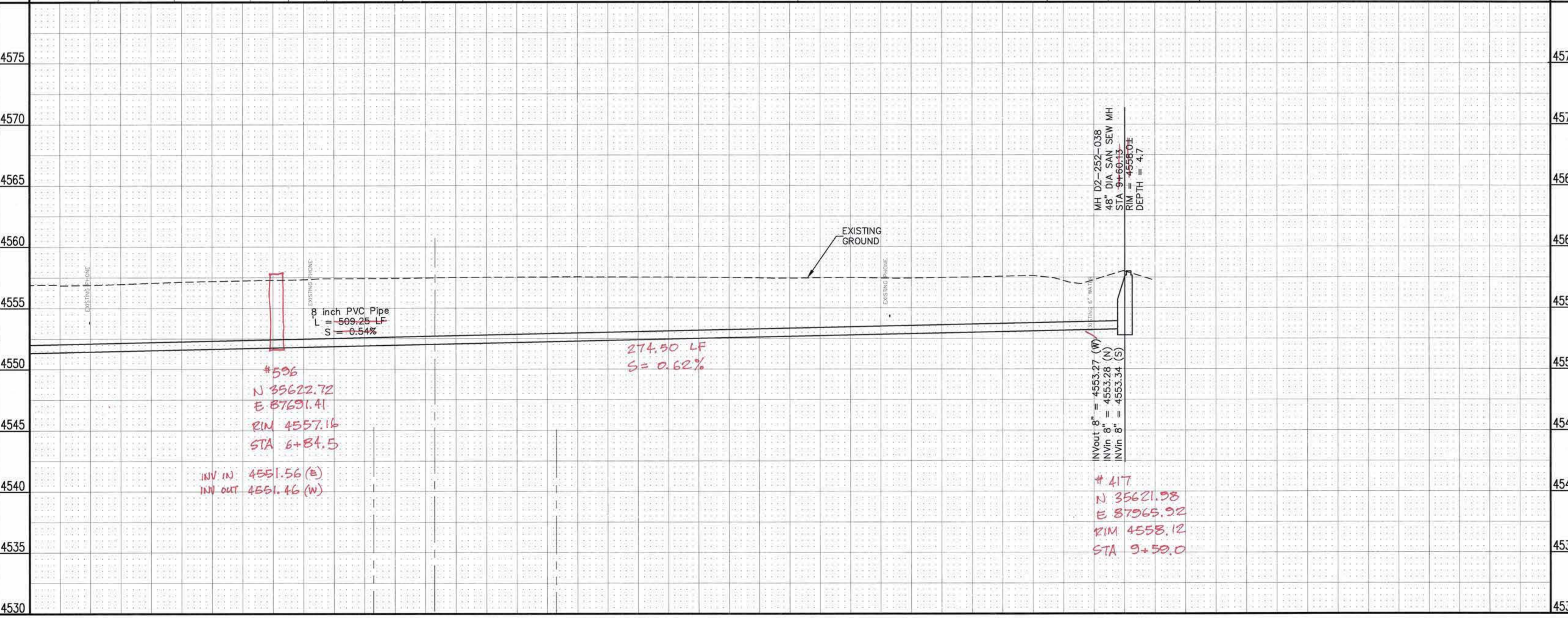
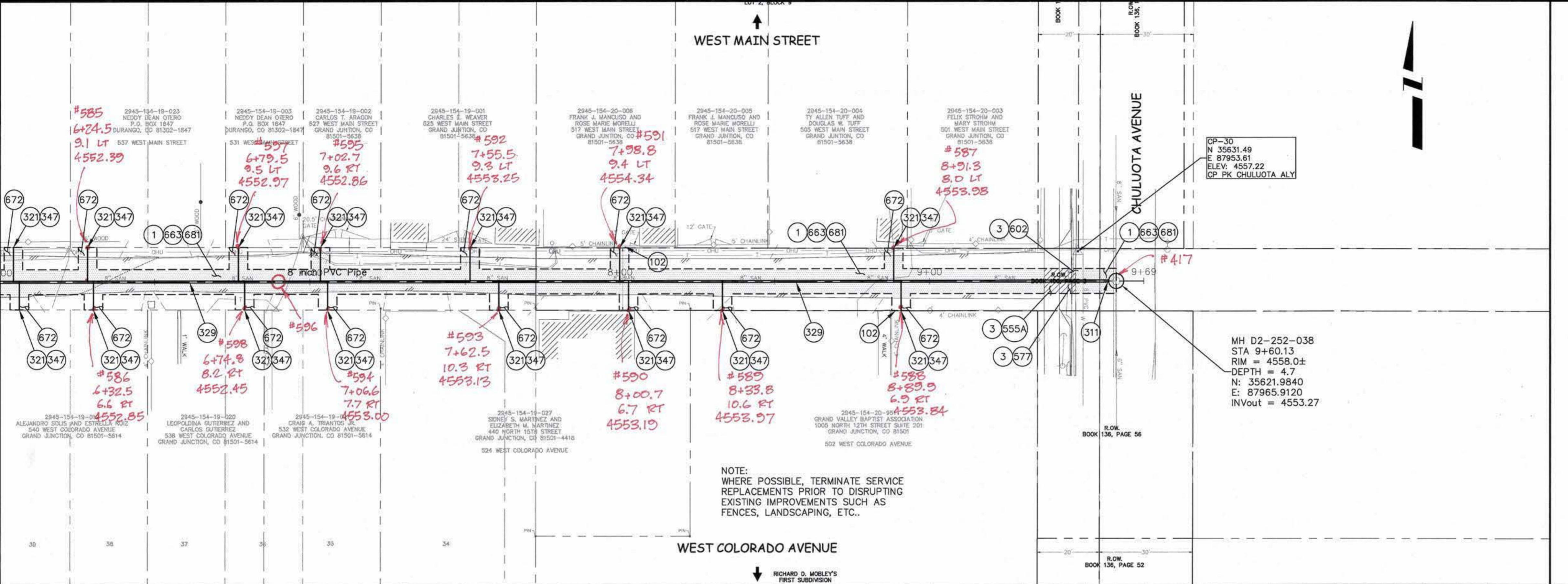
**2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE**  
W. MAIN ST./W. COLORADO AVE. WEST TO CHULUOTA STA. 1+00 TO 6+00

CONSTRUCTION NOTES

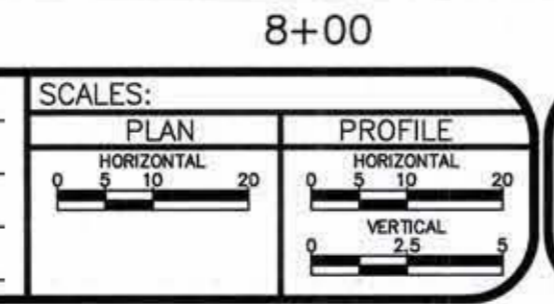
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 102 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE ( 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 347 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45. ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 555A 608.06 - CONCRETE SIDEWALK (8" THICK)
- 577 608.06 - CONCRETE DRIVEWAY SECTION (6" THICK) (RESIDENTIAL)
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- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)

SEE SHEET 23

MATCH LINE



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
			JAH	01/2009
			DD	01/2009



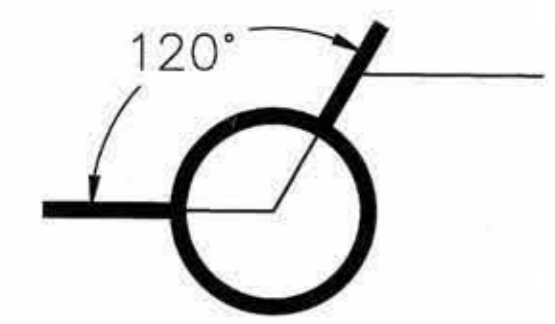
PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION

2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
W. MAIN ST./W. COLORADO AVE. WEST TO CHULUOTA STA. 6+00 TO 10+00

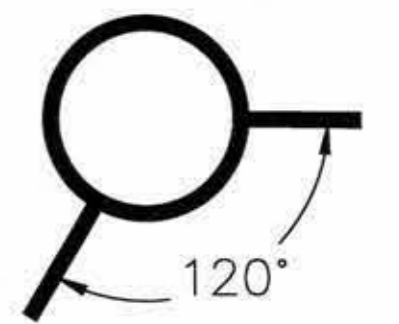




- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 306 102.11/108.5 - MANHOLE BARREL SECTION (D>5") (48" I.D.).
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE (8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 329A 102.9/108.2 - 6" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347A 102.9/104.2/108.2 - 6" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)

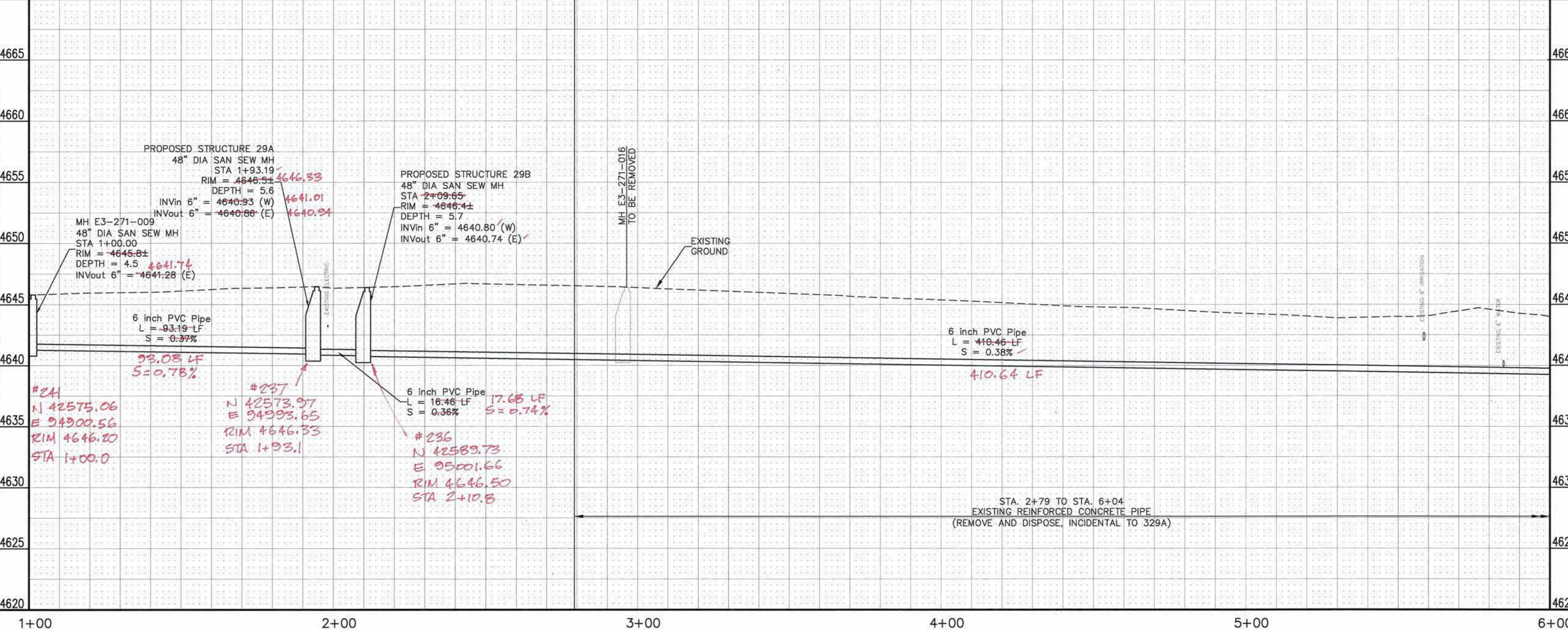
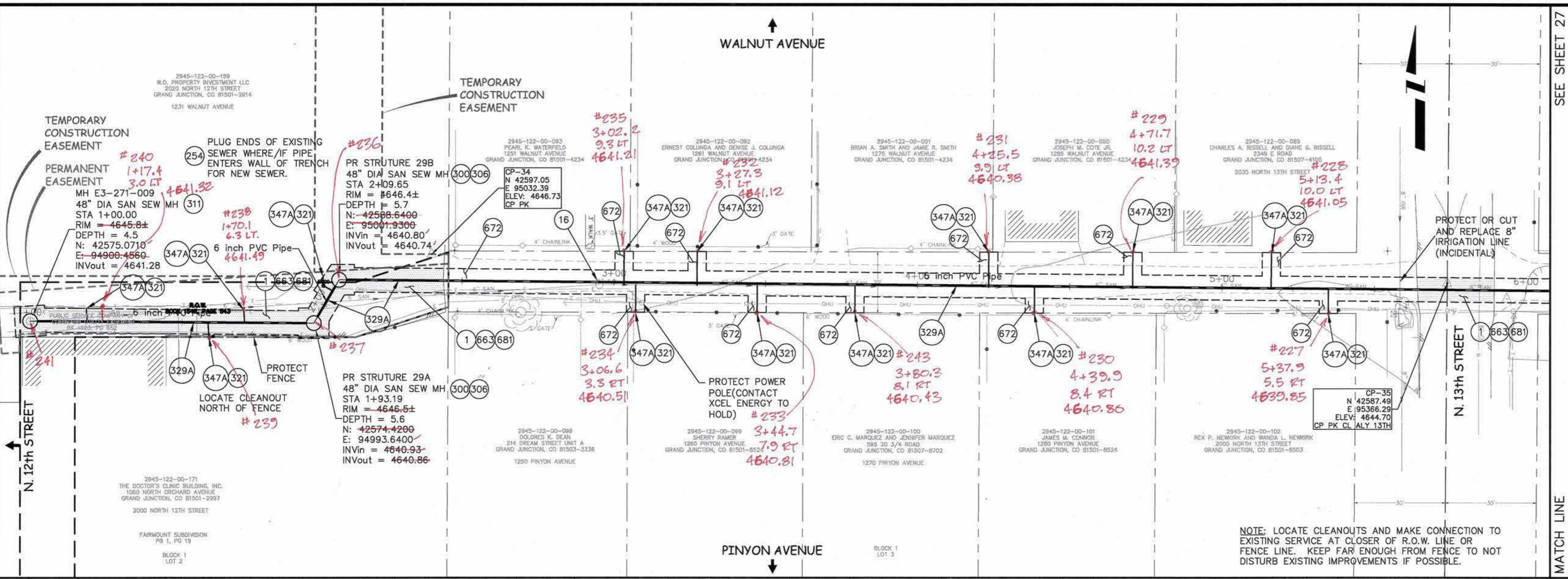


PR STRUCTURE 2A



PR STRUCTURE 2B

NOTE: LOCATE CLEANOUTS AND MAKE CONNECTION TO EXISTING SERVICE AT CLOSER OF R.O.W. LINE OR FENCE LINE. KEEP FAR ENOUGH FROM FENCE TO NOT DISTURB EXISTING IMPROVEMENTS IF POSSIBLE.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			JAH	01/2009
2			DD	01/2009
3				
4				

SCALES:  
 PLAN: 1" = 20'  
 PROFILE: HORIZONTAL 1" = 20', VERTICAL 1" = 5'

CITY OF Grand Junction COLORADO  
 PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

2009 SEWER REPLACEMENTS  
 SANITARY SEWER PLAN AND PROFILE  
 WALNUT AVE./PINYON AVE. 12th ST TO 15th ST STA 1+00 TO STA 6+00

CONSTRUCTION NOTES

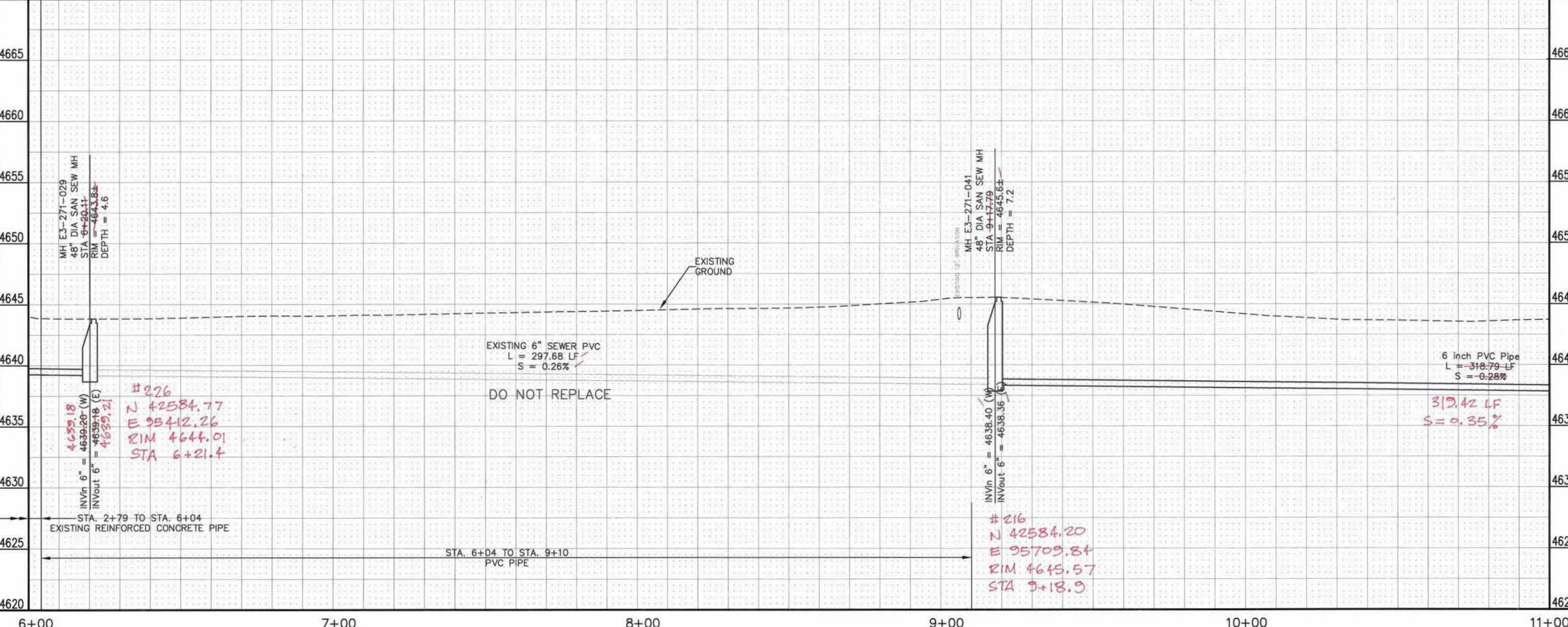
- (311) 102.11/108.5 - CONNECT TO EXISTING MANHOLE ( 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).
- (321) 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- (329A) 102.9/108.2 - 6" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- (347A) 102.9/104.2/108.2 - 6" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- (672) 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)

SEE SHEET 26

SEE SHEET 28

MATCH LINE

MATCH LINE



REVISION	DESCRIPTION	DATE

DRAWN BY	JAH	DATE	01/2009
DESIGNED BY	DD	DATE	01/2009
CHECKED BY		DATE	
APPROVED BY		DATE	

SCALES:

PLAN	PROF
HORIZONTAL 1" = 20'	HORIZONTAL 1" = 20'
VERTICAL 1" = 5'	VERTICAL 1" = 5'

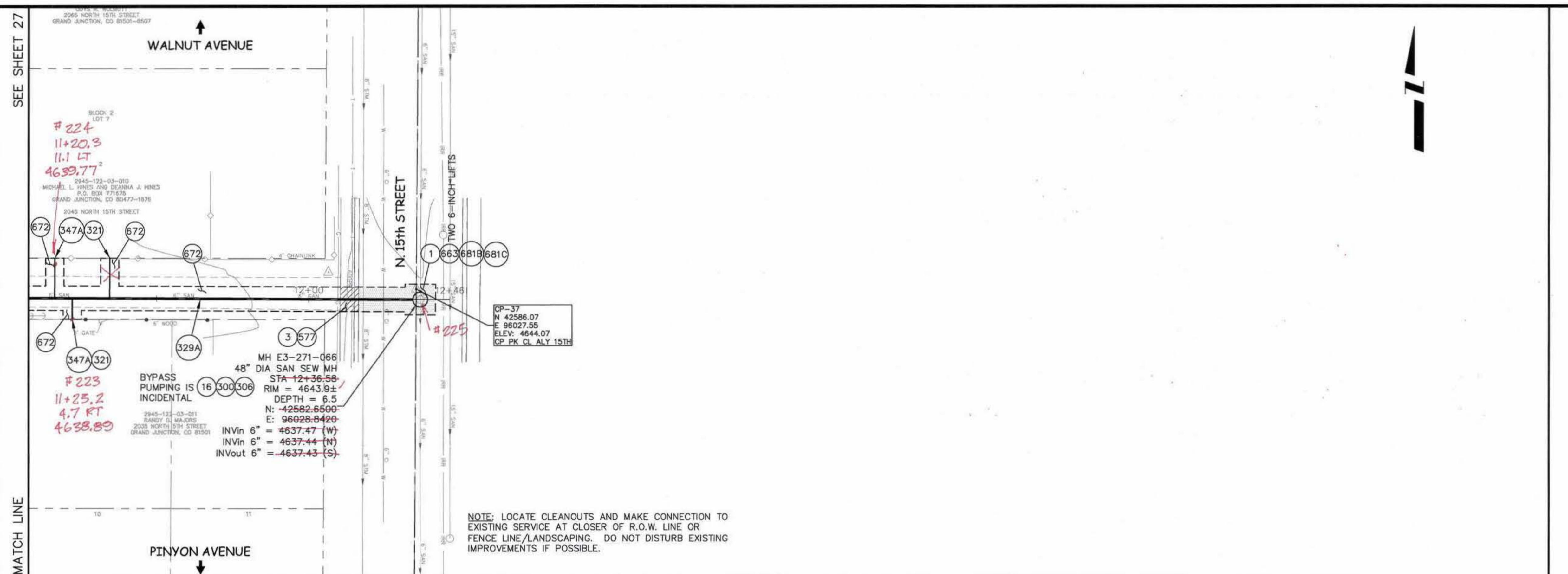
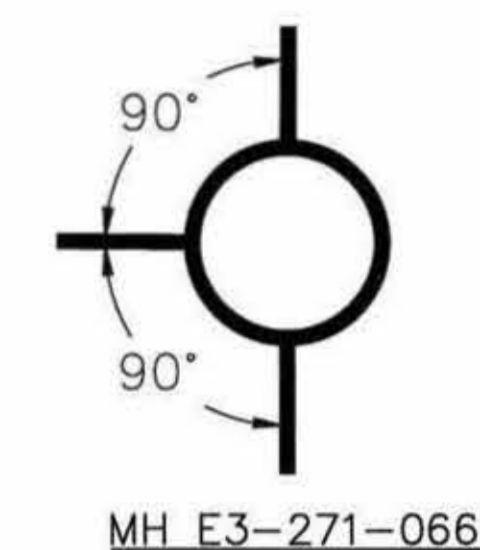


**PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION**

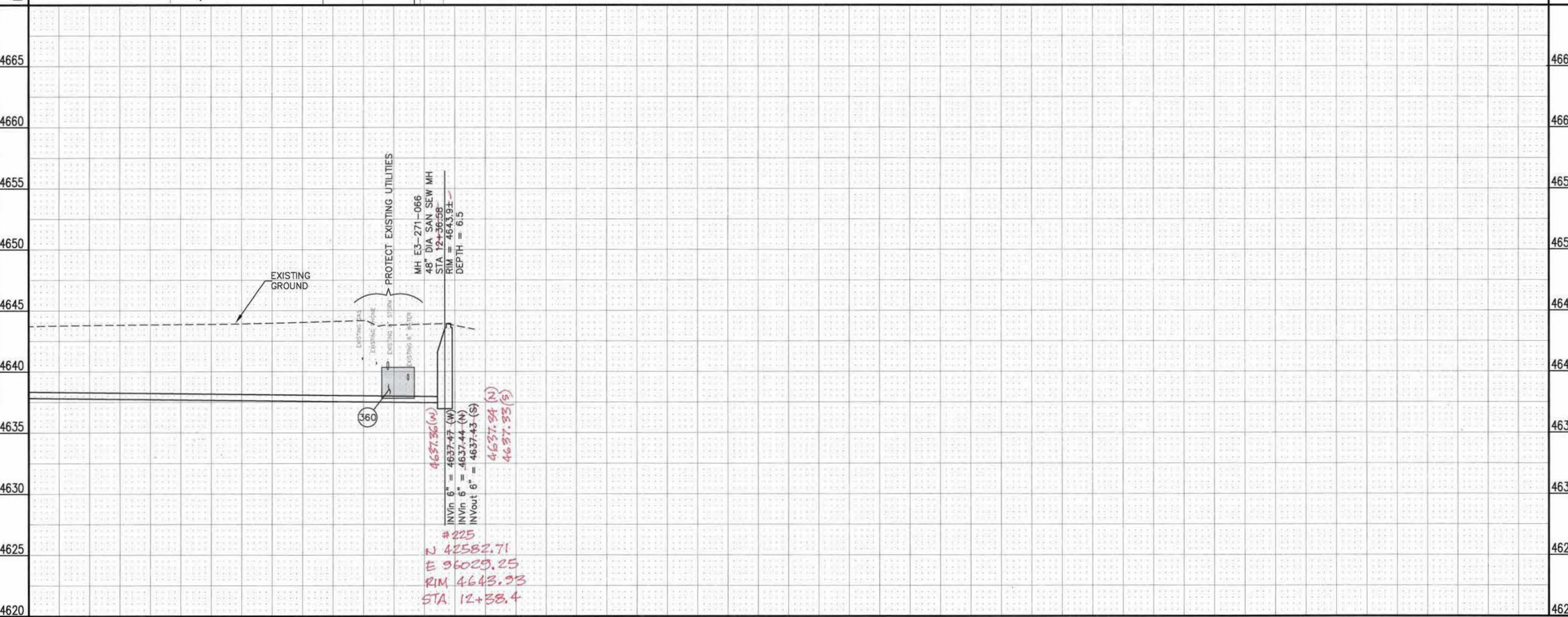
**2009 SEWER REPLACEMENTS SANITARY SEWER PLAN AND PROFILE**  
 WALNUT AVE./PINYON AVE. 12th ST TO 15th ST STA 6+00 TO STA 11+00

CONSTRUCTION NOTES

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 306 102.11/108.5 - MANHOLE BARREL SECTION (D>S) (48" I.D.).
- 321 102.9/108.2 - 4" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 329A 102.9/108.2 - 6" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS OR IMPORTED MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL, AS DETERMINED OR AGREED TO BY THE ENGINEER.
- 347A 102.9/104.2/108.2 - 6" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 360 206.00 - STRUCTURE BACKFILL (FLOWFILL). PAID PER CY. IN AREAS WHERE SANITARY SEWER IS INSTALLED BELOW AN EXISTING A.C. WATERLINE, FLOWFILL SHALL BE USED AS TRENCH BACKFILL WITHIN 5 FEET HORIZONTALLY OF THE WATERLINE.
- 577 608.06 - CONCRETE DRIVEWAY SECTION (6" THICK) (RESIDENTIAL)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)
- 681B 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (5" THICK) (GRADING SX, BINDER GRADE PG 64-22); ONE 3-INCH LIFT, ONE 2-INCH LIFT)
- 681C 401.08 - T-TOP PAVEMENT PATCHING: MILL/PLANE 2" DEEPX2' WIDE PERIMETER AROUND ASPHALT PATCH AREA, PLACE 2" LIFT HOT BITUMINOUS PAVEMENT (GRADING AND GRADE TO MATCH PATCH SPEC.) LIFT, INTEGRAL W/ FINAL 2" LIFT OF PATCHING HBP.



NOTE: LOCATE CLEANOUTS AND MAKE CONNECTION TO EXISTING SERVICE AT CLOSER OF R.O.W. LINE OR FENCE LINE/LANDSCAPING. DO NOT DISTURB EXISTING IMPROVEMENTS IF POSSIBLE.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			JAH	01/2009
2			DD	01/2009
3				
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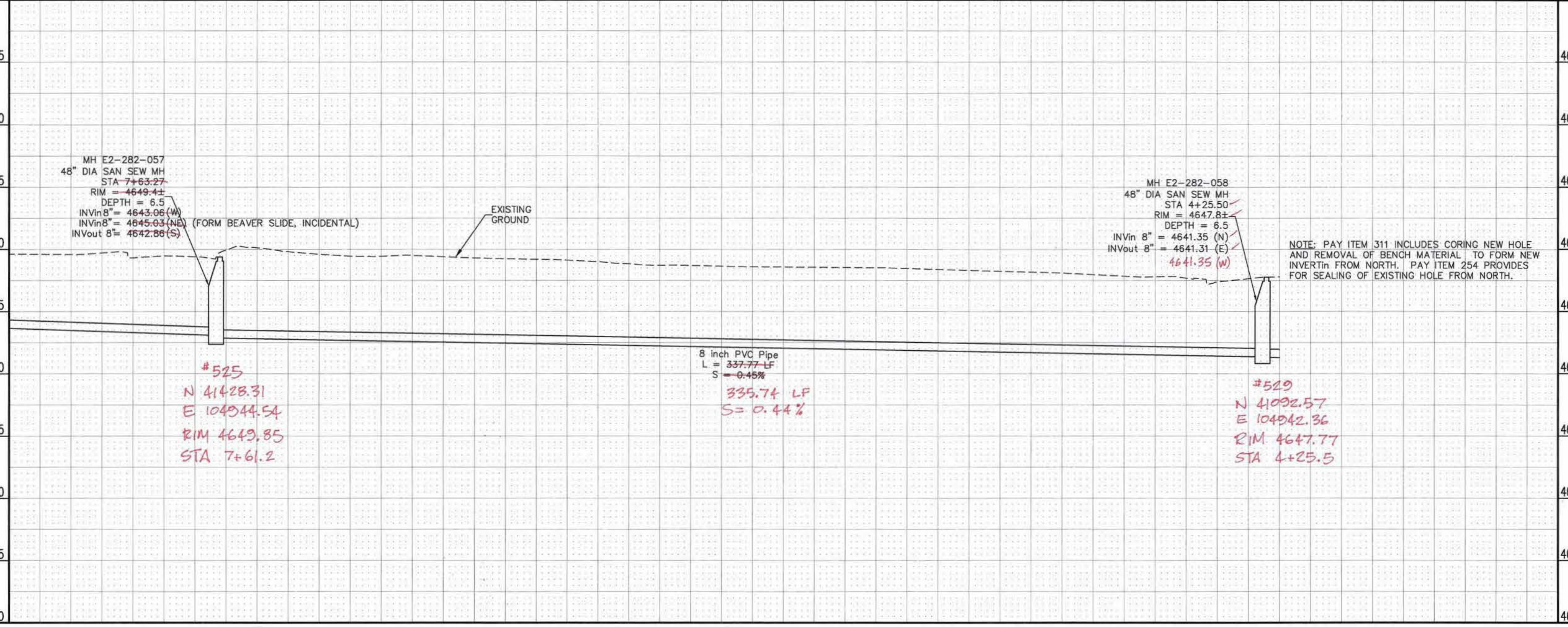
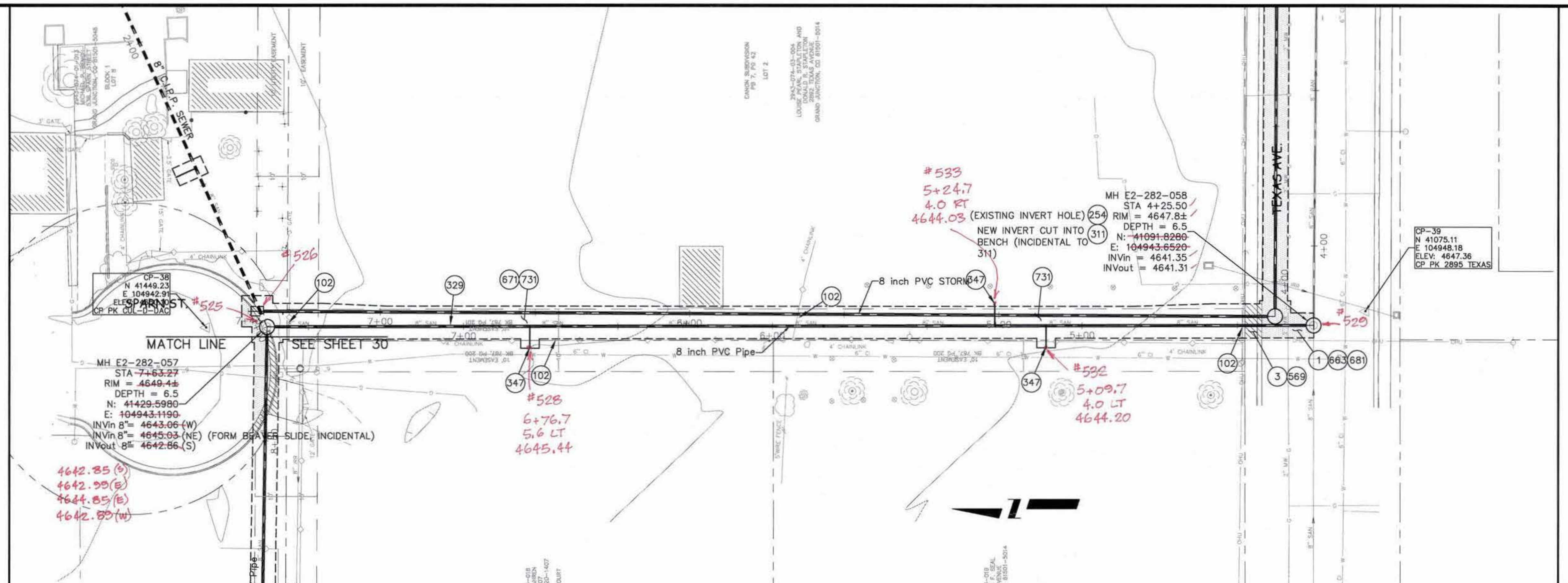
SCALES:  
 PLAN: 1" = 20'  
 PROFILE: 1" = 20'

PUBLIC WORKS  
 AND UTILITIES  
 ENGINEERING DIVISION

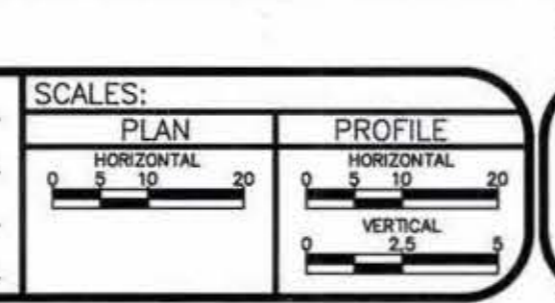
2009 SEWER REPLACEMENTS  
 SANITARY SEWER PLAN AND PROFILE  
 WALNUT AVE./PINYON AVE. 12th ST TO 15th ST STA 11+00 TO STA 13+00

CONSTRUCTION NOTES

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 102 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE ( 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 347 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- 569 608.06 - MONOLITHIC VERTICAL CURB, GUTTER AND SIDEWALK (MATCH EXISTING)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 671 304 - WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. MATCH EXISTING TYPE. THICKNESS IS 2" MIN. AND 3" MAX.
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 731 207 - STOCKPILE AND RESET TOP 12 INCHES OF TOPSOIL OR IMPORT NEW FROM SOURCE APPROVED BY ENGINEER. KEEP FREE FROM DEBRIS. PLACE AT 90% MAX DENSITY WITH TOP 3" LOOSENEED FOR SEED BED.



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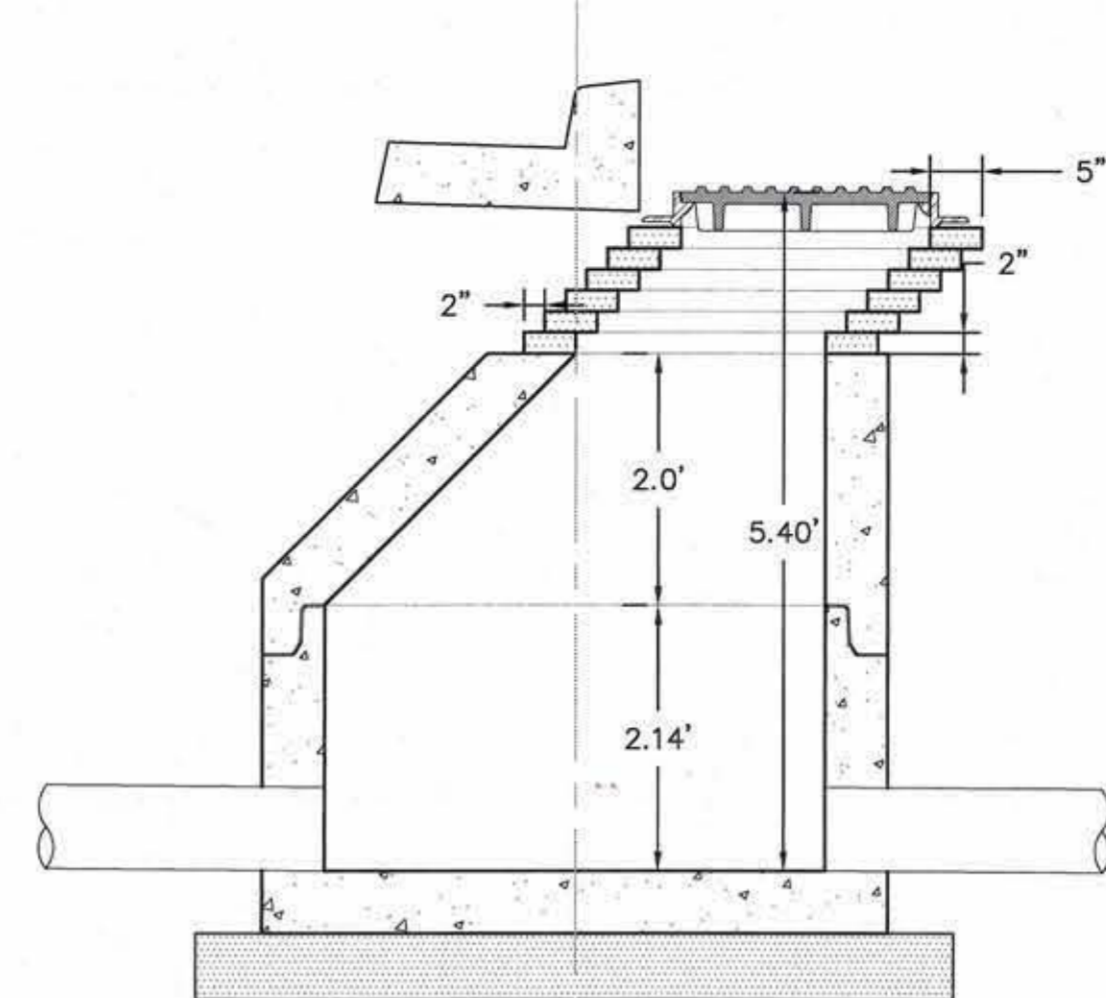


**PUBLIC WORKS  
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ENGINEERING DIVISION**

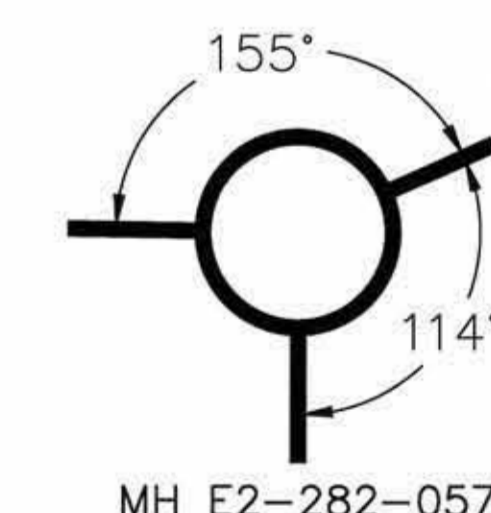
**2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
WEST OF SPARN STREET STA 4+25.50 TO STA 12+00**

CONSTRUCTION NOTES

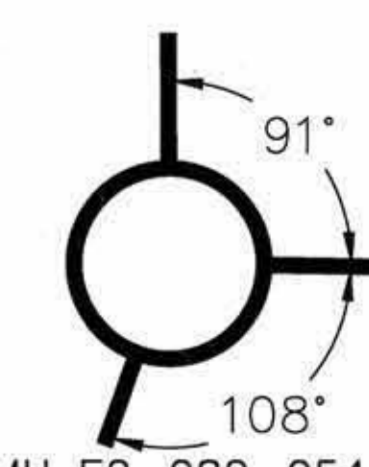
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 101 210 - RESET SPRINKLER SYSTEM (COMPLETE IN PLACE)
- 102 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 270 UU/108 - REMOVE AND REPAIR IRRIGATION LATERAL/MAIN, SIZE VARIES (4 -12 INCHES). INCLUDES CUTTING AND REMOVAL OF CONFLICTING PIPE SECTION, SECURING OF WATER FLOWS, INSTALLATION OF REPAIR SECTION INCLUDING COUPLING(S), AND BEDDING, HAUNCHING, AND BACKFILL OF PIPE AS PER STANDARD SPECIFICATIONS FOR UNDERGROUND UTILITIES. PIPE SHALL BE PIP-PVC SDR 26 MEETING 102.10c. IRRIGATION/SPRINKLER SYSTEM COMPONENTS PAID FOR PER PAY ITEM 101.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 306 102.11/108.5 - MANHOLE BARREL SECTION (DEPTH>5')(DIA. = 48"). INCLUDES STORM SEWER AND SANITARY SEWER MANHOLE BARREL SECTIONS.
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 347 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).



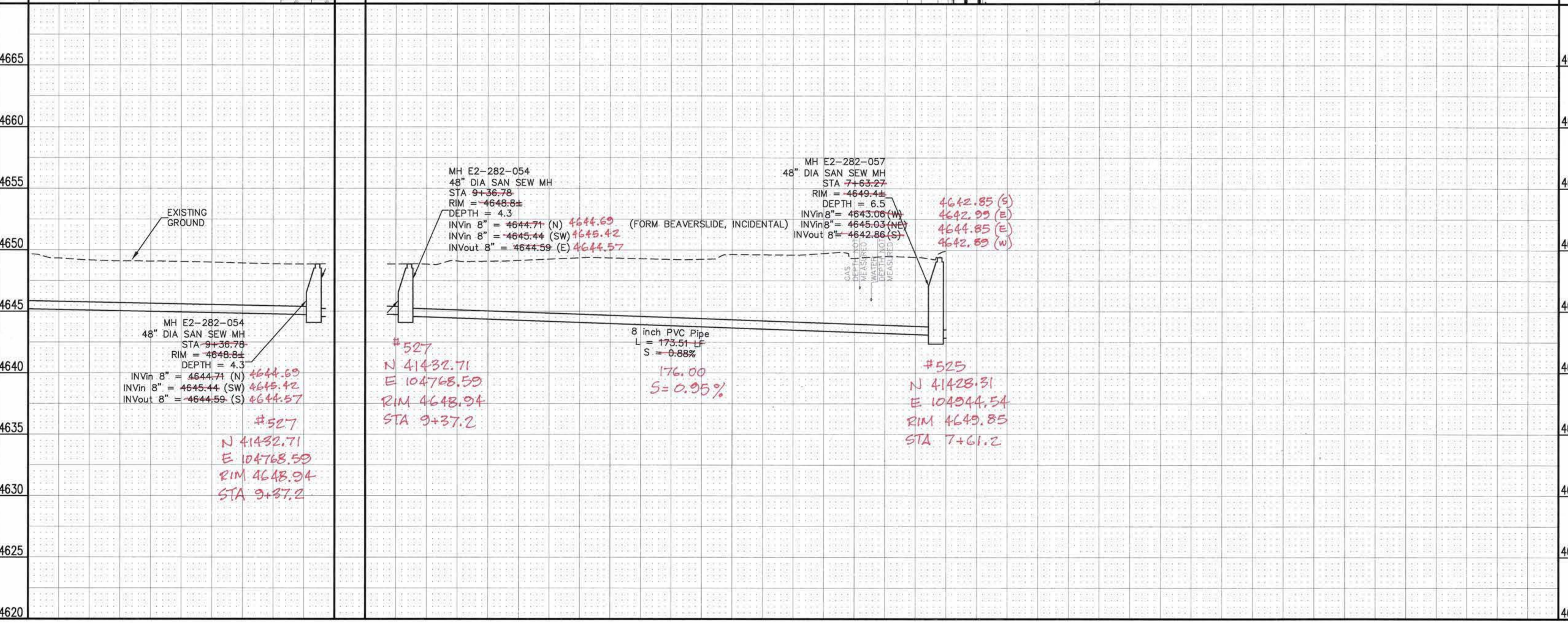
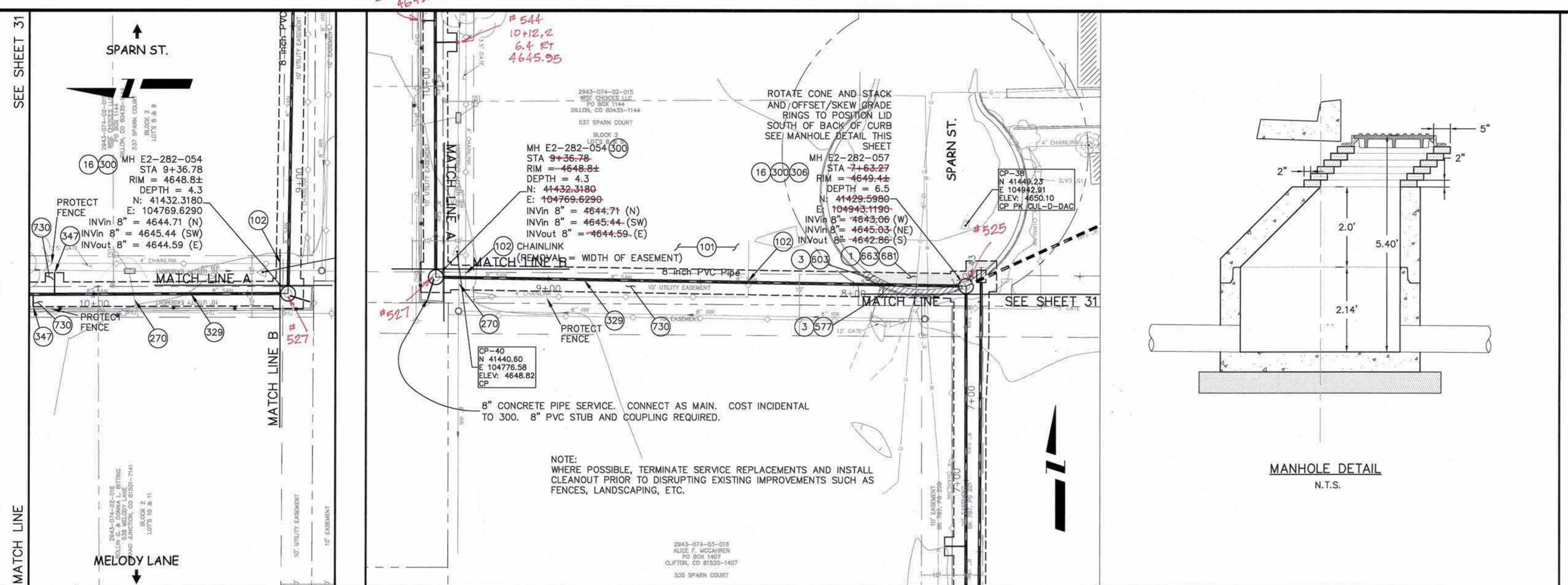
MANHOLE DETAIL  
N.T.S.



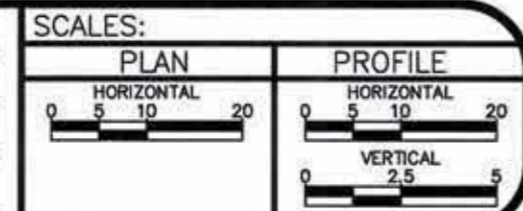
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MH E2-282-054



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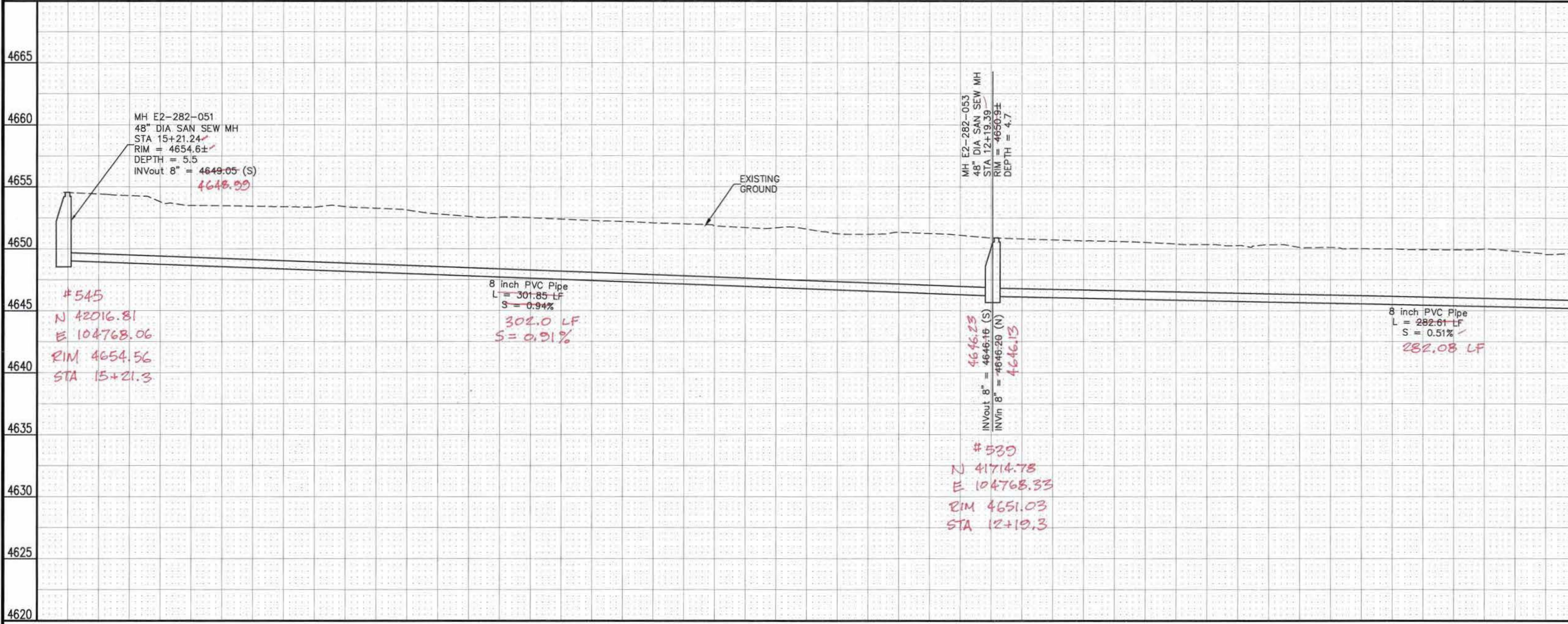
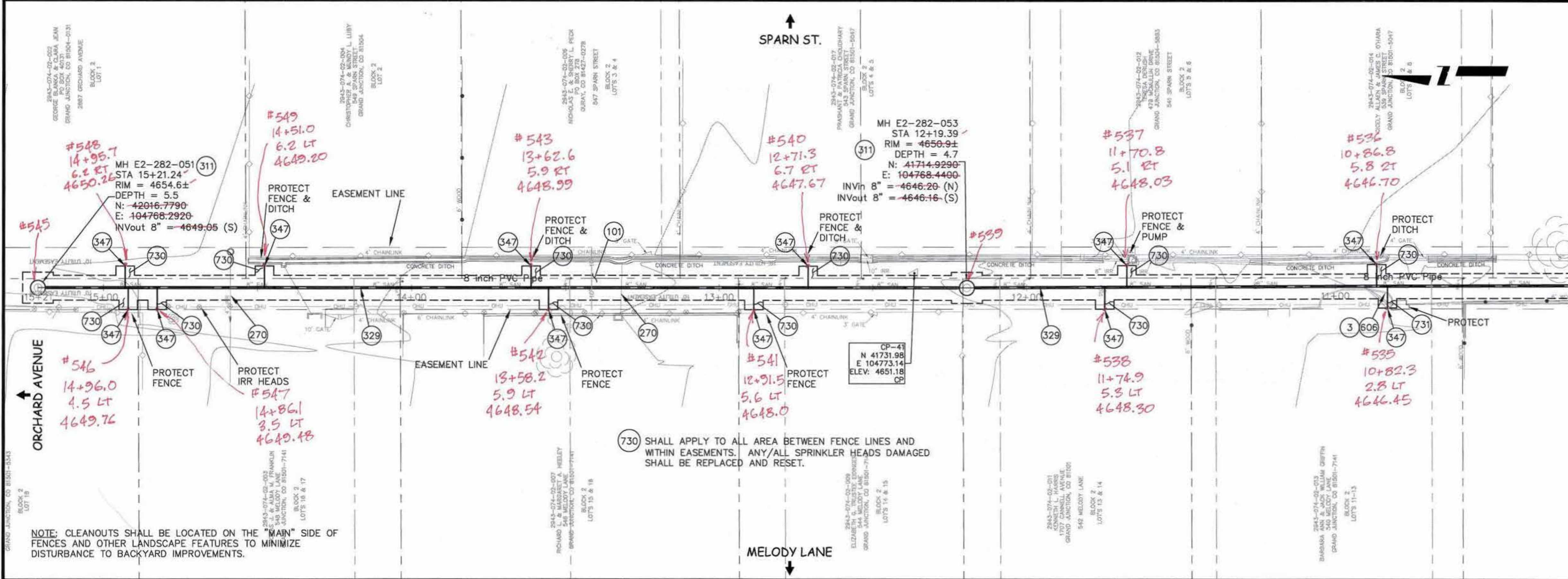


PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION

2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
WEST OF SPARN STREET STA 7+63.27 TO STA 10+30

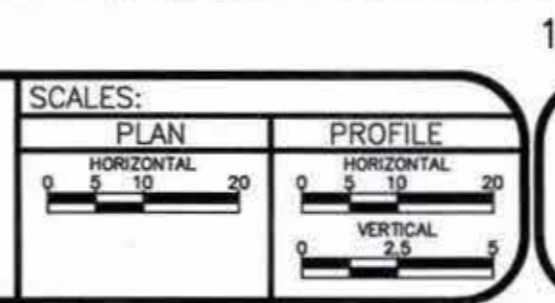
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 101 210 - RESET SPRINKLER SYSTEM (COMPLETE IN PLACE)
- 270 UU/108 - REMOVE AND REPAIR IRRIGATION LATERAL/MAIN, SIZE VARIES (4 - 12 INCHES). INCLUDES CUTTING AND REMOVAL OF CONFLICTING PIPE SECTION, SECURING OF WATER FLOWS, INSTALLATION OF REPAIR SECTION INCLUDING COUPLING(S), AND BEDDING, HAUNCHING, AND BACKFILL OF PIPE AS PER STANDARD SPECIFICATIONS FOR UNDERGROUND UTILITIES. PIPE SHALL BE PIP-PVC SDR 26 MEETING 102.10c. IRRIGATION/SPRINKLER SYSTEM COMPONENTS PAID FOR PER PAY ITEM 101.
- 311 102.11/108.5 - CONNECT TO EXISTING MANHOLE ( 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).
- 328 102.9/108.2 - 8" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 347 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "V" CONNECTION" SS-06 AND SS-07).
- 606 608 - CONCRETE CURB (6" WIDE, 18" TOTAL HT.)
- 730 212 - RESOD AREA AS SHOWN
- 731 207 - STOCKPILE AND RESET TOP 12 INCHES OF TOPSOIL OR IMPORT NEW FROM SOURCE APPROVED BY ENGINEER. KEEP FREE FROM DEBRIS. PLACE AT 90% MAX DENSITY WITH TOP 3" LOOSENEED FOR SEED BED.

SEE SHEET 30  
MATCH LINE



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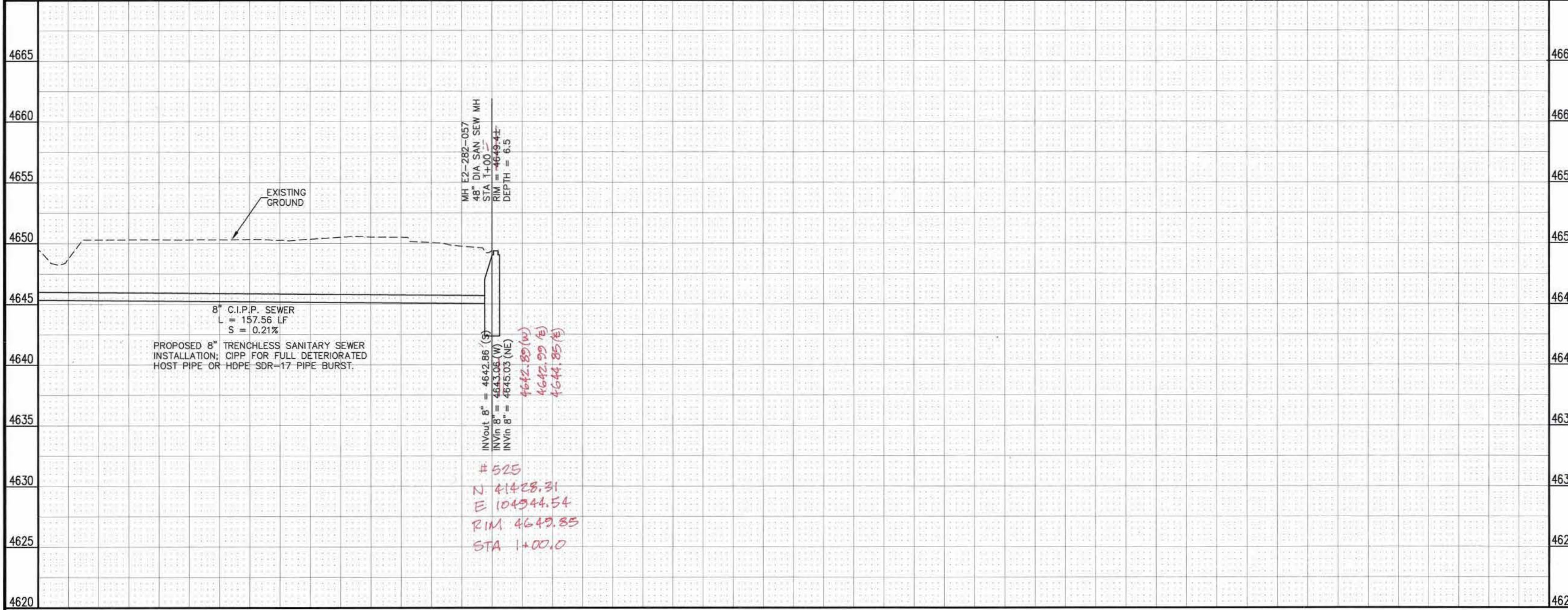
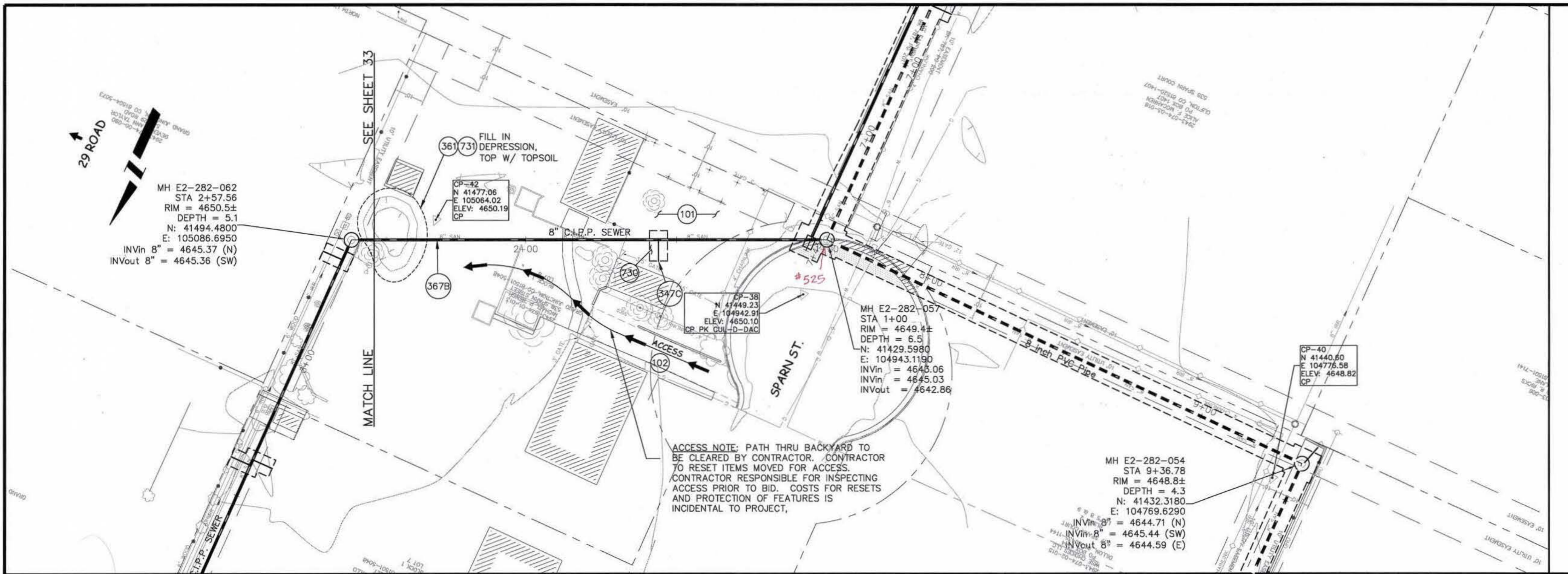
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**PUBLIC WORKS  
AND UTILITIES  
ENGINEERING DIVISION**

**2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
WEST OF SPARN STREET STA 10+30 TO STA 15+21.24**

- (101) 210 - RESET SPRINKLER SYSTEM (COMPLETE IN PLACE)
- (102) 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOWN ON PLAN)
- (129) 210 - RESET IRRIGATION PUMP. INCLUDES RESET AND RECONNECTION OF PIPE, FITTINGS, PUMP, ELECTRICAL, SHELTER, AND ANY/ALL MOUNTING PANELS.
- (3470) 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON EXISTING PIPE UNDERGOING TRENCHLESS REPAIR), TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP. NEW TAP SHALL BE (W/ APPROVAL OF ENGINEER OR INSPECTOR ON CASE-SPECIFIC BASIS); FULL BODY WYE W/ STREET 45 (PIPE STUBS AND COUPLINGS INCLUDED), INSERTA-TEE, OR SADDLE; ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- (361) 103.16 - IMPORTED TRENCH BACKFILL. INCLUDES DISPOSAL OF UNSUITABLE EXCAVATED MATERIAL.
- (367B) 102.9/108.2 - TRENCHLESS INSTALLATION OF NEW 8" SANITARY SEWER IN FULLY DETERIORATED 8" VCP. P.E.-DESIGNED 8" CIPP OR HIGH DENSITY POLYETHYLENE (HDPE) SDR-17 (ASTM F714, D3550, AND D3035). LAUNCHING/RECEIVING PITS INCIDENTAL.
- (730) 212 - RESOD AREA AS SHOWN
- (731) 207 - STOCKPILE AND RESET TOP 12 INCHES OF TOPSOIL OR IMPORT NEW FROM SOURCE APPROVED BY ENGINEER. KEEP FREE FROM DEBRIS. PLACE AT 90% MAX DENSITY WITH TOP 3" LOOSENED FOR SEED BED.



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SCALES:

PLAN	PROFILE
HORIZONTAL 1" = 20'	HORIZONTAL 1" = 20'
VERTICAL 1" = 5'	VERTICAL 1" = 5'

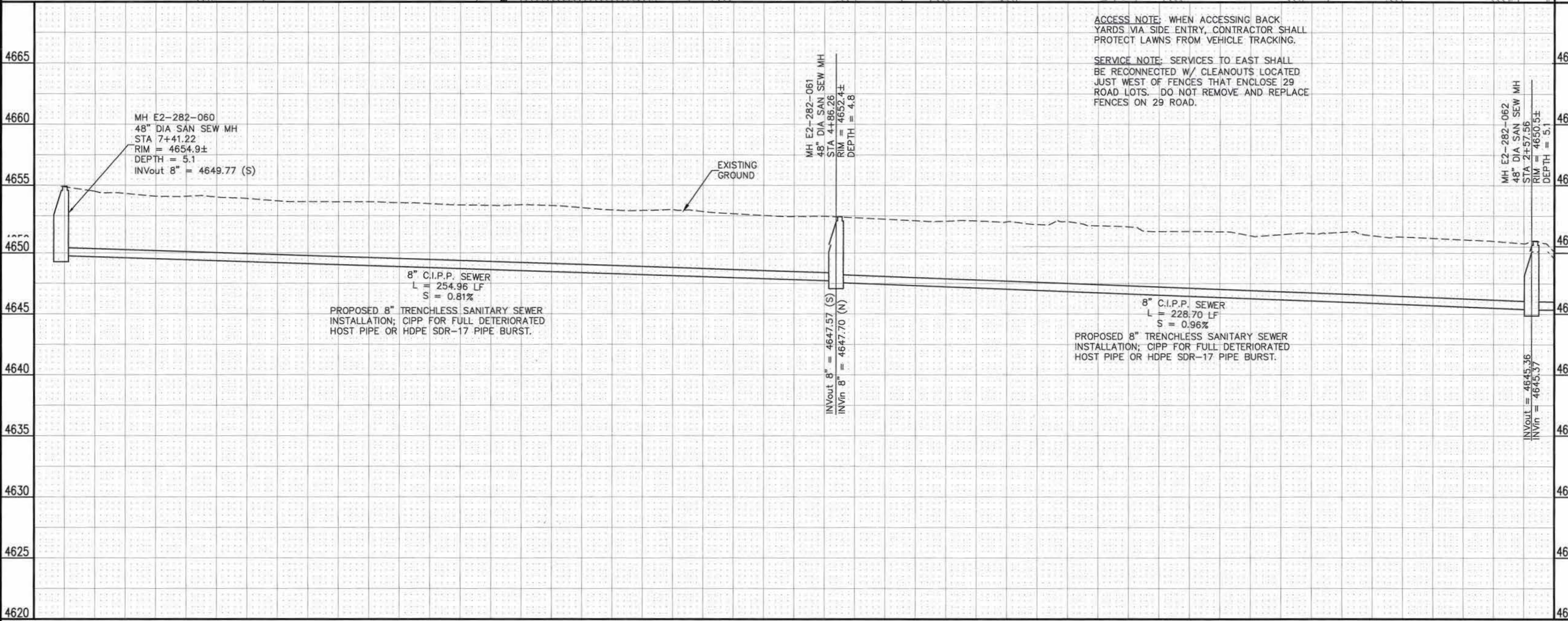
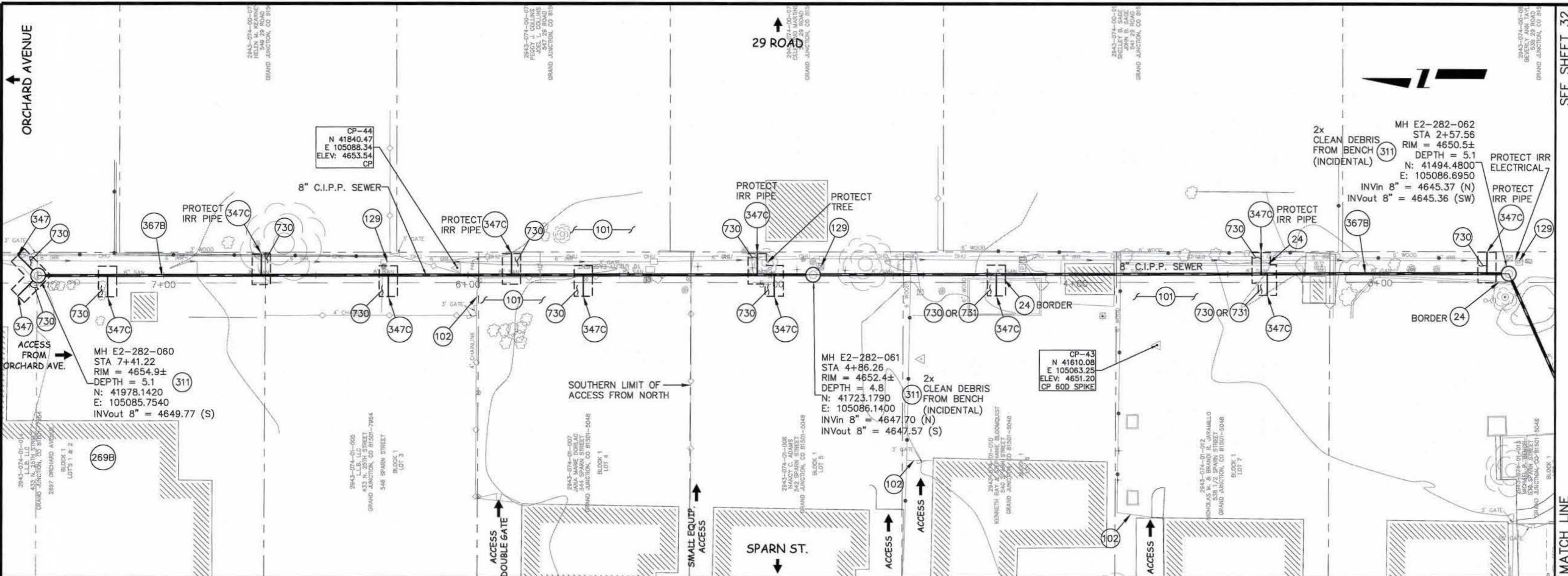
CITY OF Grand Junction COLORADO

PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
EAST OF SPARN STREET STA 1+00 TO STA 2+50



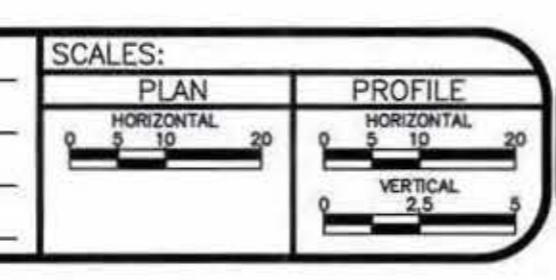
- (24) 210 - RESET LANDSCAPE APPURTENANCE.
- (101) 210 - RESET SPRINKLER SYSTEM (COMPLETE IN PLACE)
- (102) 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- (129) 210 - RESET IRRIGATION PUMP. INCLUDES RESET AND RECONNECTION OF PIPE, FITTINGS, PUMP, ELECTRICAL, SHELTER, AND ANY/ALL MOUNTING PANELS.
- (269B) UU/108.2 - BYPASS PUMPING FOR ALL OPERATIONS IMPACTING 2897 ORCHARD AVENUE. INCLUDES SERVICE ENTERING MANHOLE E2-282-060 AND SERVICE LOCATED 23 FT SOUTH OF MANHOLE AND ANY AND ALL OTHER SERVICES NOTPREVIOUSLY LOCATED ASSOCIATED WITH THIS ADDRESS. SANITARY SERVICE SHALL REMAIN IN OPERATION AT ALL TIMES DURING CONSTRUCTION AFFECTING THIS ADDRESS.
- (311) 102.1/108.5 - CONNECT TO EXISTING MANHOLE ( 8" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).
- (347) 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON NEWLY INSTALLED PVC PIPE), TO INCLUDE: FULL BODY WYE, W/ STREET 45, ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- (347C) 102.9/104.2/108.2 - 8" x 4" SEWER SERVICE TAP (NEW SERVICE ON EXISTING PIPE UNDERGOING TRENCHLESS REPAIR), TO INCLUDE: DISCONNECTING EXISTING SERVICE AND INSTALLING NEW SERVICE TAP. NEW TAP SHALL BE (W/ APPROVAL OF ENGINEER OR INSPECTOR ON CASE-SPECIFIC BASIS); FULL BODY WYE W/ STREET 45 (PIPE STUBS AND COUPLINGS INCLUDED), INSERTA-TEE, OR SADDLE; ALL BENDS AND FITTINGS, CLEANOUT, VERTICAL PIPING, TRACING WIRE, CLEANOUT RING & COVER AND CONCRETE COLLAR, AS REQUIRED, TO ALIGN AND CONNECT TO EXISTING SERVICE AT ROW LINE. 4" SERVICE PIPE SEPARATE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL "TYPICAL SERVICE "Y" CONNECTION" SS-06 AND SS-07).
- (367B) 102.9/108.2 - TRENCHLESS INSTALLATION OF NEW 8" SANITARY SEWER IN FULLY DETERIORATED 8" VCP. P.E.-DESIGNED 8" CIPP OR HIGH DENSITY POLYETHYLENE (HDPE) SDR-17 (ASTM F714, D3550, AND D3035). LAUNCHING/RECEIVING PITS INCIDENTAL.
- (730) 212 - RESOD AREA AS SHOWN
- (731) 207 - STOCKPILE AND RESET TOP 12 INCHES OF TOPSOIL OR IMPORT NEW FROM SOURCE APPROVED BY ENGINEER. KEEP FREE FROM DEBRIS. PLACE AT 90% MAX DENSITY WITH TOP 3" LOOSENED FOR SEED BED.



ACCESS NOTE: WHEN ACCESSING BACK YARDS VIA SIDE ENTRY, CONTRACTOR SHALL PROTECT LAWNS FROM VEHICLE TRACKING.

SERVICE NOTE: SERVICES TO EAST SHALL BE RECONNECTED W/ CLEANOUTS LOCATED JUST WEST OF FENCES THAT ENCLOSE 29 ROAD LOTS. DO NOT REMOVE AND REPLACE FENCES ON 29 ROAD.

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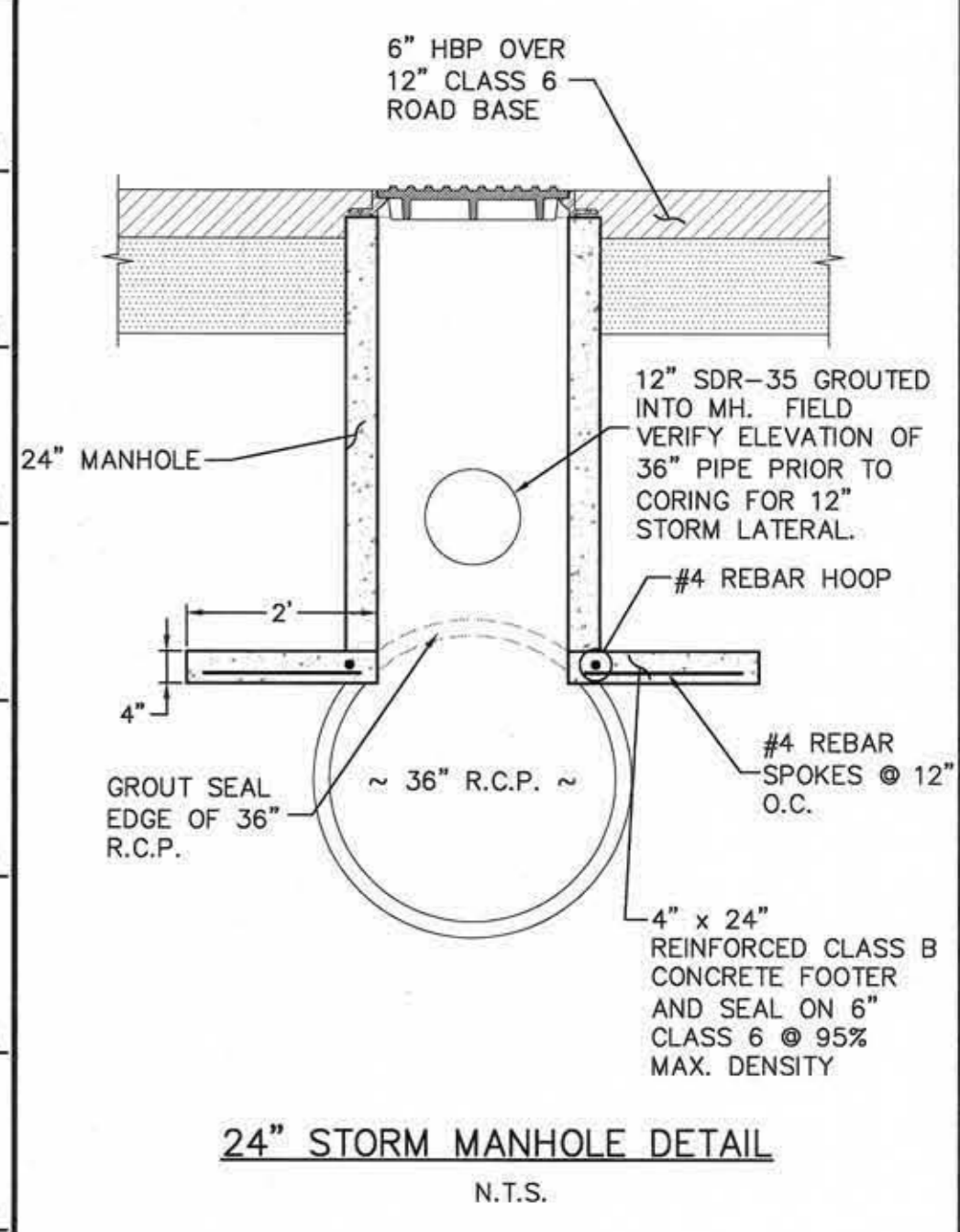
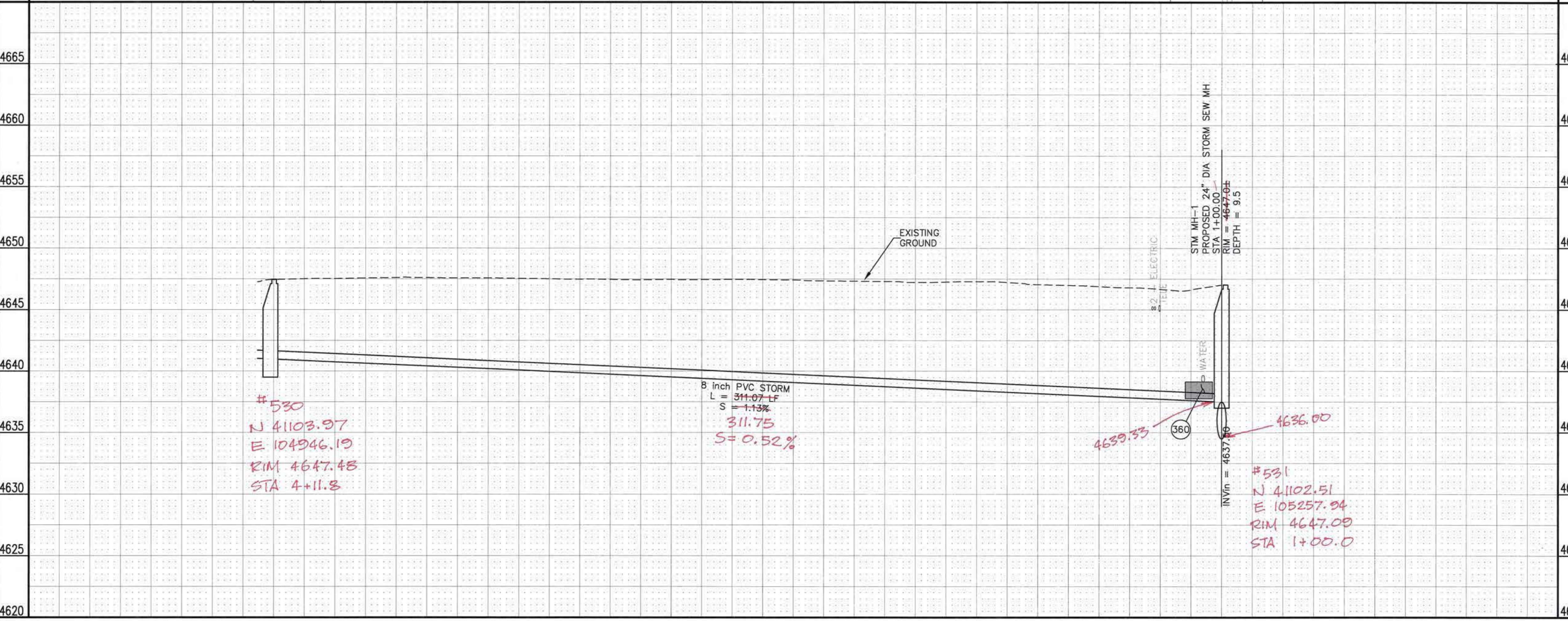
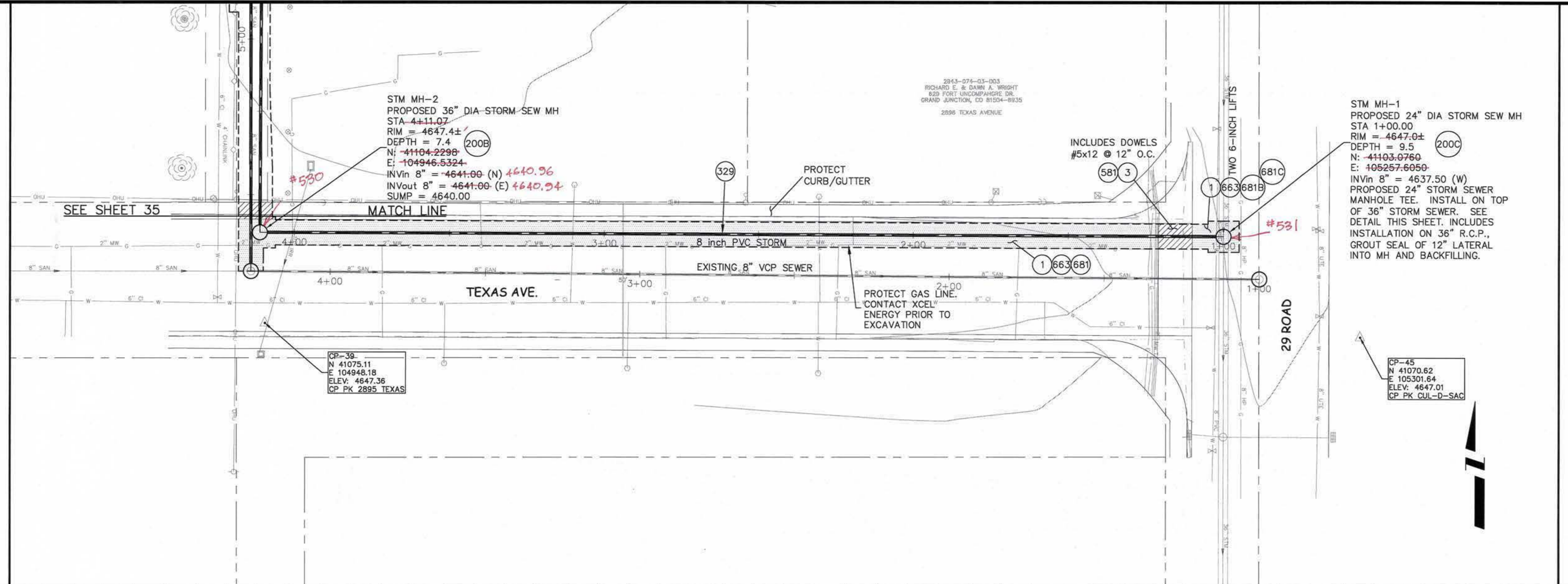


**PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION**

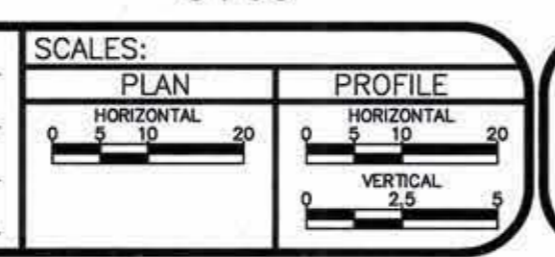
**2009 SEWER REPLACEMENTS  
SANITARY SEWER PLAN AND PROFILE  
EAST OF SPARN STREET STA 2+50 TO STA 7+41.22**

CONSTRUCTION NOTES

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 200B 102.11/108.5 - STORM SEWER BASIC MANHOLE (36" I.D.). INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES VIA CORING AND GROUTING AND ADJUSTING TO FINAL GRADE.
- 200C 102.11/108.5 - STORM SEWER BASIC MANHOLE (24" I.D.). INCLUDES CONNECTION OF ADJACENT STORM SEWER LINE VIA CORING AND GROUTING, CONNECTING TO UNDERLYING STORM SEWER MAIN AS PER CONSTRUCTION DRAWING DETAIL, AND ADJUSTING TO FINAL GRADE.
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 360 206.00 - STRUCTURE BACKFILL (FLOWFILL). PAID PER CY. IN AREAS WHERE SANITARY SEWER IS INSTALLED BELOW AN EXISTING A.C. WATERLINE, FLOWFILL SHALL BE USED AS TRENCH BACKFILL WITHIN 5 FEET HORIZONTALLY OF THE WATERLINE.
- 581 608.06 - CONCRETE DRAINAGE PAN (6" WIDE)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 681B 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (5" THICK) (GRADING SX, BINDER GRADE PG 64-22); ONE 3-INCH LIFT, ONE 2-INCH LIFT)
- 681C 401.08 - T-TOP PAVEMENT PATCHING: MILL/PLANE 2" DEEPX2' WIDE PERIMETER AROUND ASPHALT PATCH AREA, PLACE 2" LIFT HOT BITUMINOUS PAVEMENT (GRADING AND GRADE TO MATCH PATCH SPEC.) LIFT, INTEGRAL W/ FINAL 2" LIFT OF PATCHING HBP.



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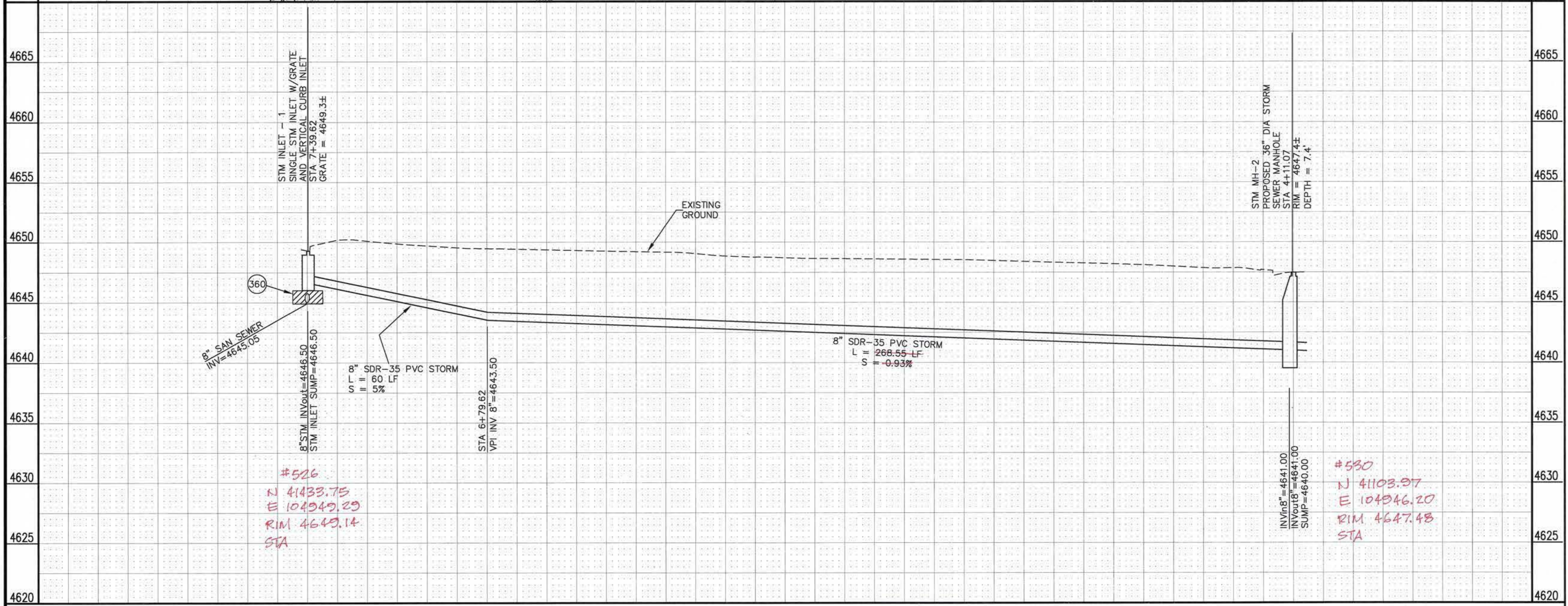
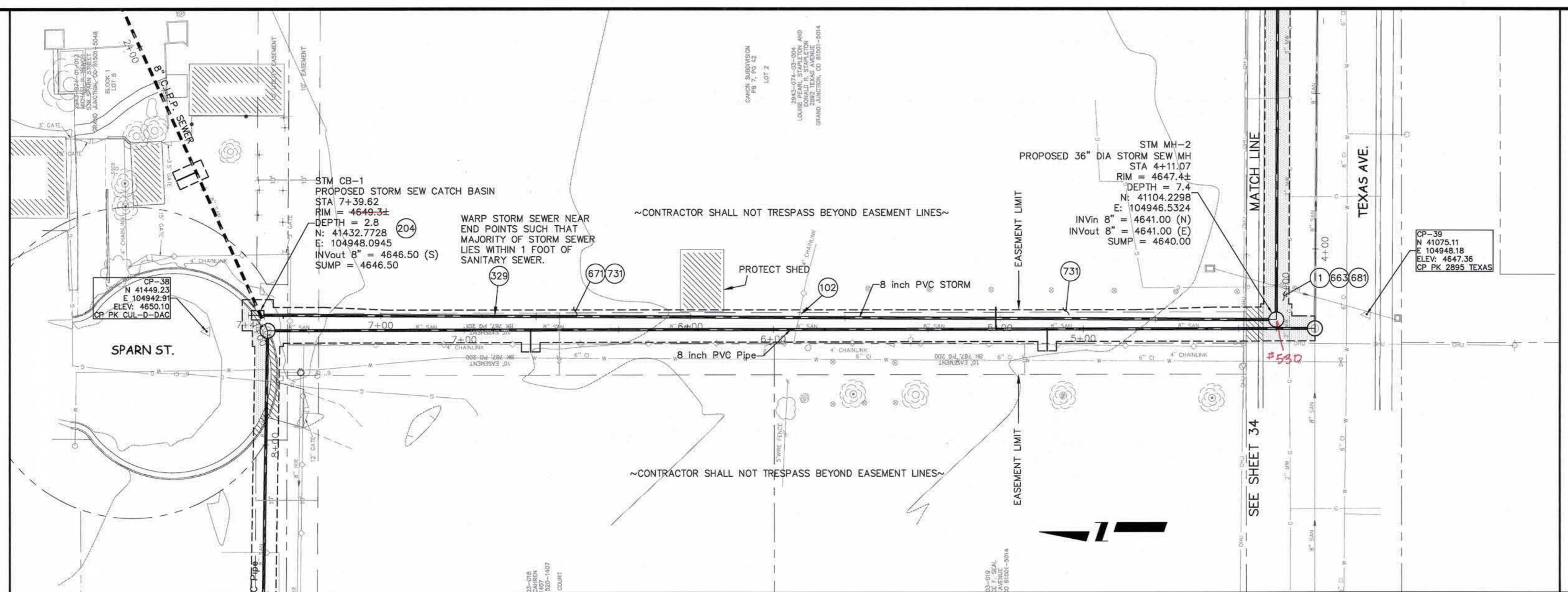


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ENGINEERING DIVISION

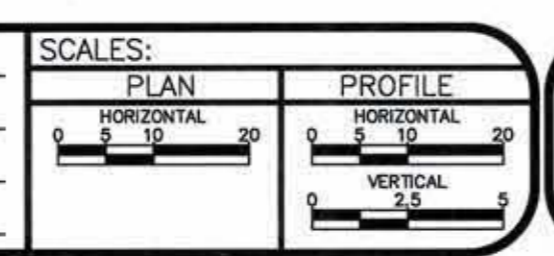
2009 SEWER REPLACEMENTS  
STORM SEWER PLAN AND PROFILE  
SOUTH OF SPARN STREET STA 1+00 TO STA 4+11.07

CONSTRUCTION NOTES

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 102 210 - RESET FENCE AND GATE AS REQUIRED. (HEIGHT AND MATERIAL AS SHOWN ON PLAN)
- 204 102.13/108.6 - SINGLE STORM DRAIN INLET (VERTICAL CURB) (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-07). INCLUDES CONNECTING LATERAL VIA CORING AND GROUTING THROUGH CORNER OF CATCH BASIN BOX.
- 329 102.9/108.2 - 8" GRAVITY SEWER PIPE (D-3034 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 360 103.16108.2 - IMPORTED TRENCH BACKFILL (PIT RUN). INCLUDES DISPOSAL OF UNSUITABLE AND/OR EXCESS MATERIAL AT DISPOSAL SITE PROCURED BY CONTRACTOR.
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
- 671 304 - WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. MATCH EXISTING TYPE. THICKNESS IS 2" MIN. AND 3" MAX.
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS)
- 731 207 - STOCKPILE AND RESET TOP 12 INCHES OF TOPSOIL OR IMPORT NEW FROM SOURCE APPROVED BY ENGINEER. KEEP FREE FROM DEBRIS. PLACE AT 90% MAX DENSITY WITH TOP 3" LOOSENED FOR SEED BED.

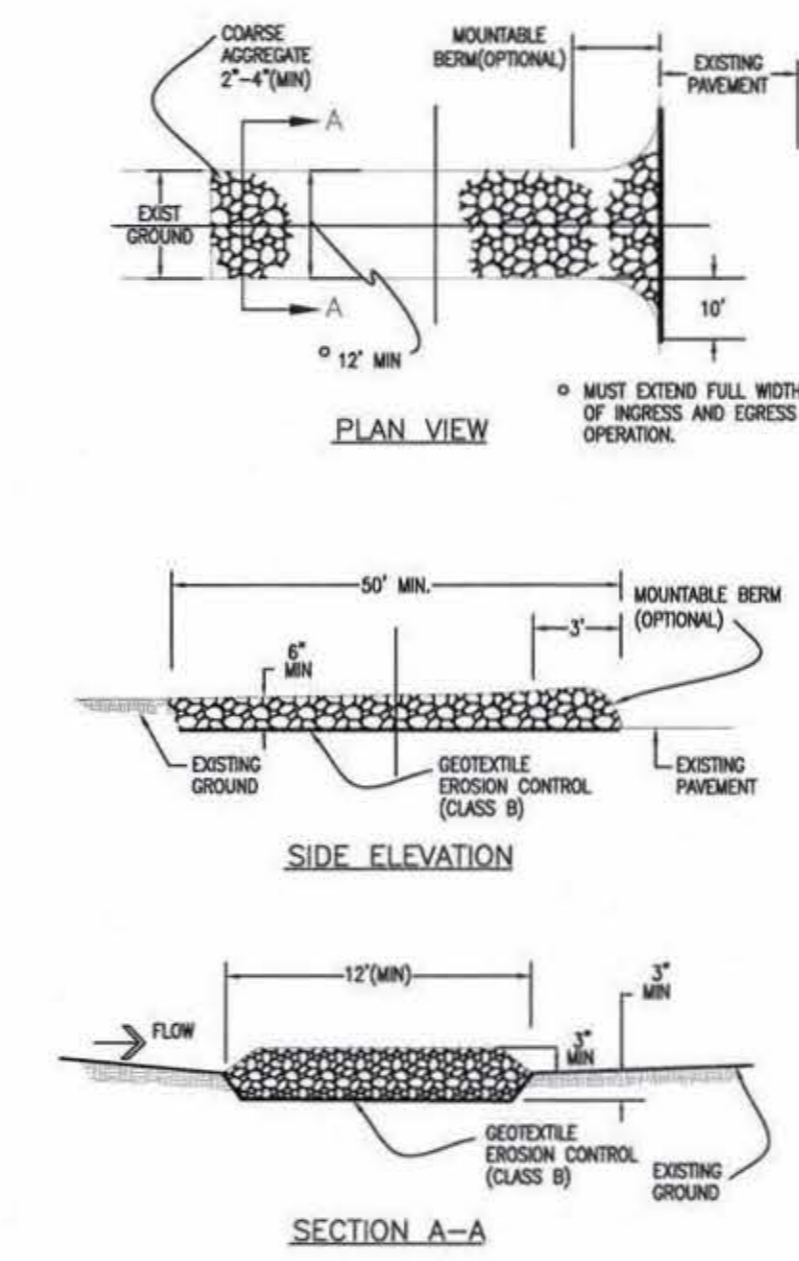
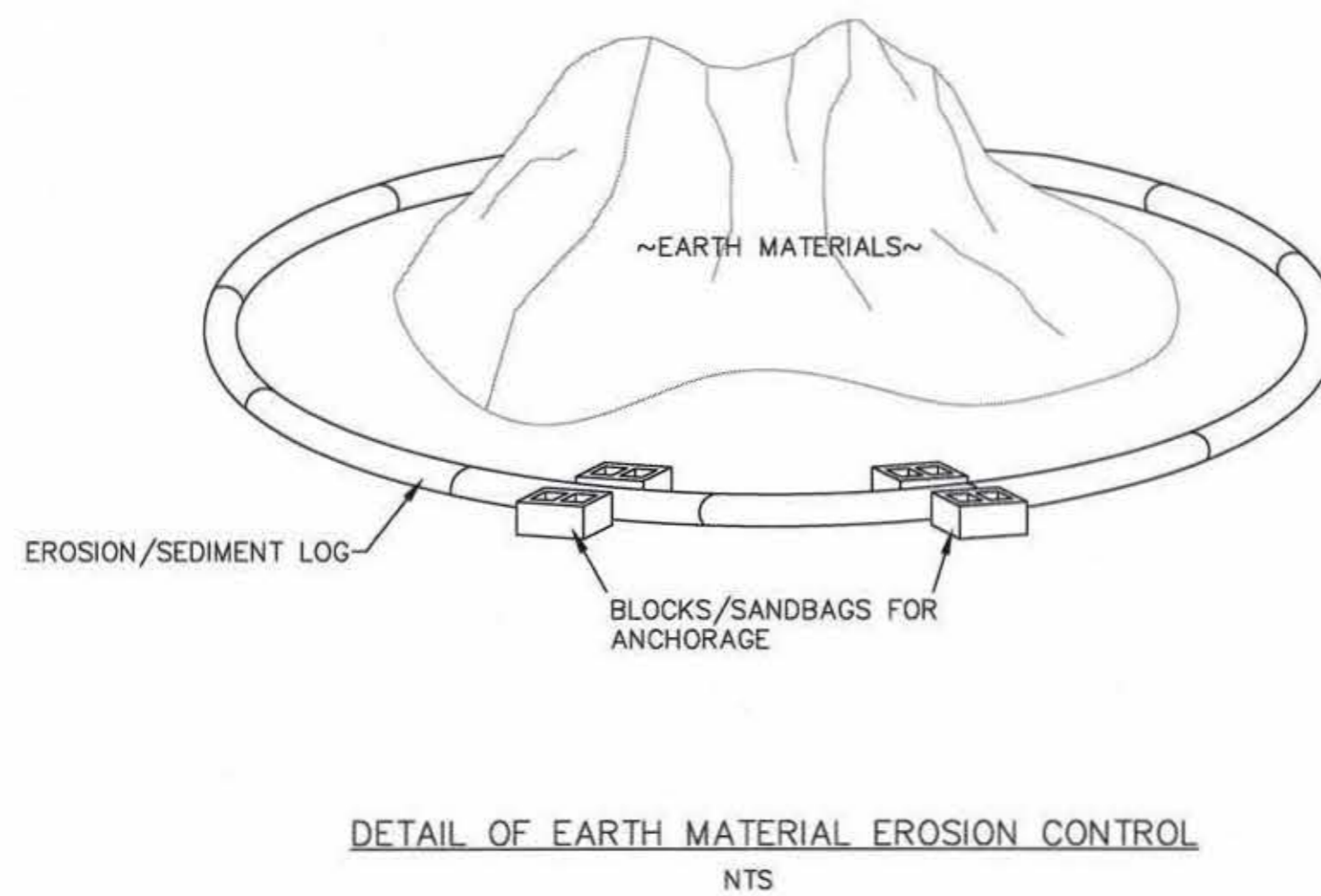
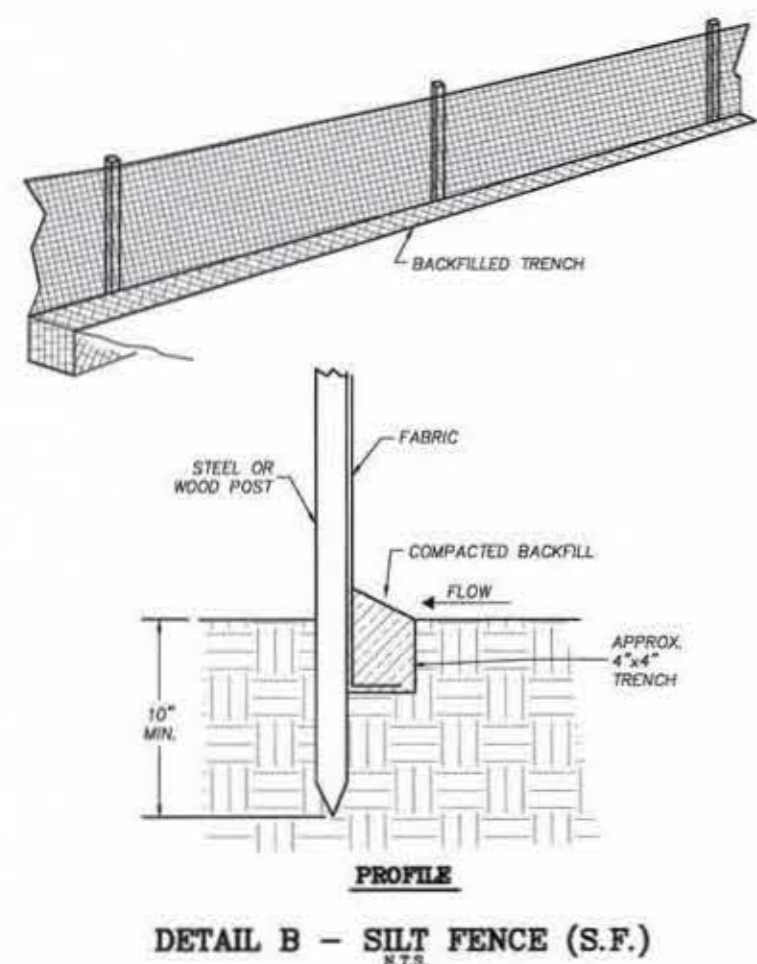


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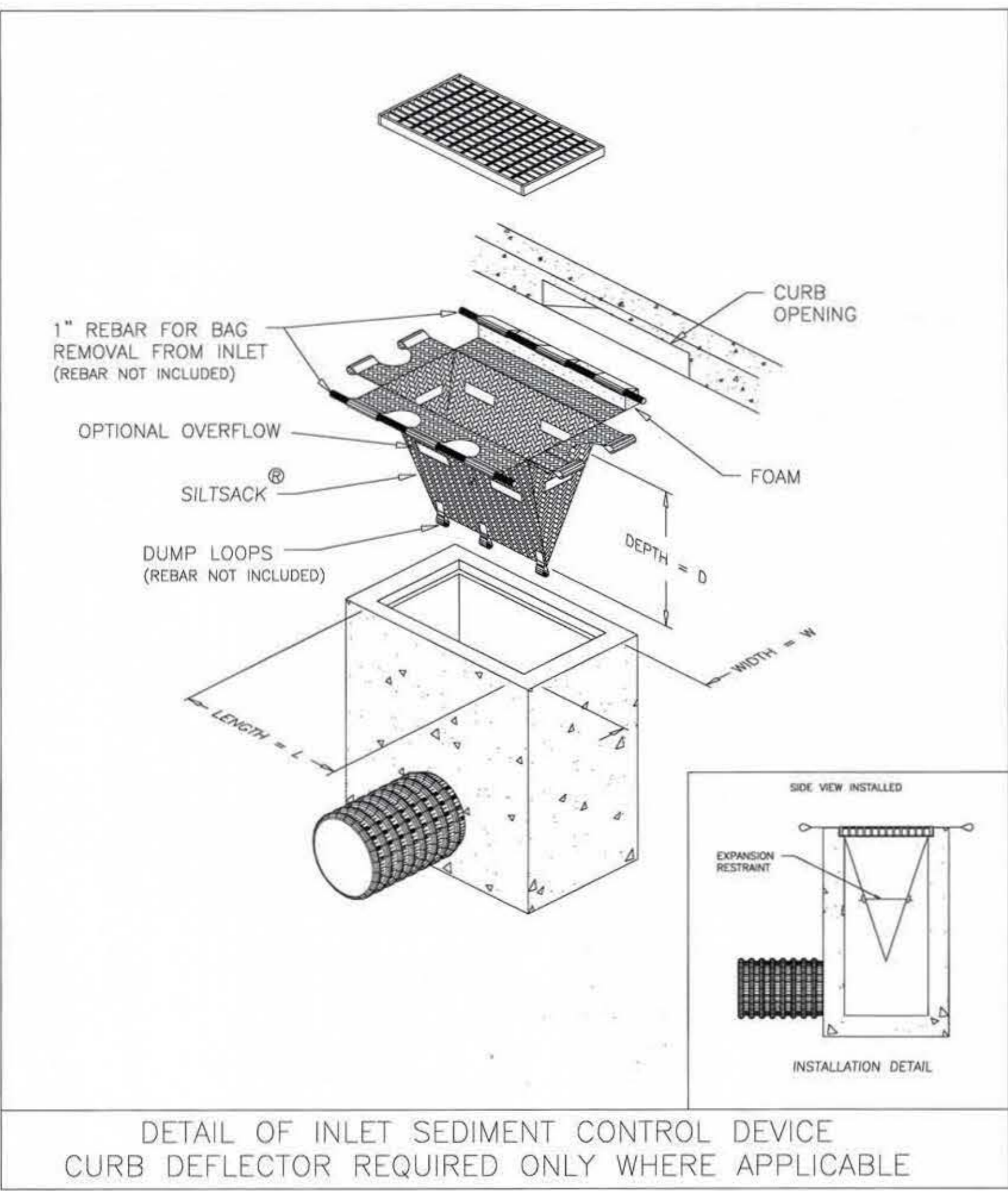


PUBLIC WORKS  
 AND UTILITIES  
 ENGINEERING DIVISION

2009 SEWER REPLACEMENTS  
 STORM SEWER PLAN AND PROFILE  
 SOUTH OF SPARN STREET STA 4+11.07 TO STA 7+39.62



**NOTE:**  
 Because of the widely distributed nature of the work locations, this Stormwater Management Plan will not delineate individual locations or assignments for BMP's. However, the Contractor shall still be responsible for implementing all Stormwater Management practices in accordance with Federal, State, and Local laws and regulations. Specifically, the Contractor shall:  
 Protect all inlets using a combination of upstream controls (silt fences, wattles, grading controls, sweeping) and inlet controls (rock filters, inlet silt sacks, etc.)  
 Prevent onsite erosion and offsite sediment transport using measures such as silt fences, wattles, grading controls, tracking pads, and others  
 Manage stormwater run-on using measures such as silt fences, wattles, grading controls, bypasses, and others  
 Provide sediment migration controls for all stockpiles of materials using wattles, silt fences, grading controls, and others;  
 Provide concrete washout areas conforming with Stormwater Management regulations  
 Prevent wind-erosion via dust control measures;  
 Provide street sweeping for fugitive sediment not contained via other BMP's  
 Provide spill-containment measures and spill-containment refueling practices for the handling of all fuels and hazardous liquids.  
 Because individual BMP's are not shown for each location, the Contractor shall note on the construction plans the locations and types of BMP's used, as they are installed and implemented. This set of redlined and continuously updated plans shall constitute a required component of the SWMP and shall be kept onsite at all times and available for inspection by the Project Engineer, the Project Inspector, and regulatory enforcement personnel.



**SILTSACK OR EQUIVALENT SPECIFICATIONS**

NOTE: THE SILTSACK SHALL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

PROPERTIES	TEST METHOD	UNITS	VALUES
GRAB TENSILE STRENGTH	ASTM D-4632		300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632		20 %
PUNCTURE	ASTM D-4833		120 LBS
MULLEN BURST	ASTM D-3786		800 PSI
TRAPEZOID TEAR	ASTM D-4533		120 LBS
UV RESISTANCE	ASTM D-4355		80 %
APPARENT OPENING SIZE	ASTM D-4751		40 US SIEVE
FLOW RATE	ASTM D-4491		40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491		0.55 SEC -1

**REGULAR FLOW SILTSACK**®  
 (FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS	VALUES
GRAB TENSILE STRENGTH	ASTM D-4632		265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632		20 %
PUNCTURE	ASTM D-4833		135 LBS
MULLEN BURST	ASTM D-3786		420 PSI
TRAPEZOID TEAR	ASTM D-4533		45 LBS
UV RESISTANCE	ASTM D-4355		90 %
APPARENT OPENING SIZE	ASTM D-4751		20 US SIEVE
FLOW RATE	ASTM D-4491		200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491		1.5 SEC -1

**HI-FLOW SILTSACK**®  
 (FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

**Performance Standards**  
 The general requirements for erosion control work shall be as follows:  
 1. All grading shall be designed, constructed and completed in such a manner so that exposed area of any disturbed land shall be limited to the shortest time period.  
 2. Temporary erosion and sediment control facilities shall be removed and all disturbed areas graded and stabilized with permanent soil erosion control measures pursuant to approved plans and specifications.  
 During Construction (Temporary Measures)  
 1. Erosion Logs: The use of a single row of erosion logs shall be installed from the edge of ditch or swale unless specified otherwise. Installation shall be in accordance with the detail as shown on the plans. All stockpiles of construction earth materials and excavation spoil must be encircled with erosion control logs during any/all storm events generating runoff.  
 2. All vehicles exiting the construction site with dirt caked tires must pass a Tracking Control Pad. Aggregate in the Tracking Control Pad shall be added as needed during the project to maintain effectiveness. Tracking pads shall be located as needed to remove dirt/soil/sediment from equipment/trucks. Tracking pad material shall not be paid for separately and shall be included in the stormwater management pay item. Scale tickets shall be turned in to inspector & kept separate from other materials tickets. Tracking pads shall be of sufficient length and thickness to remove all sediment.  
 3. Siltsacks shall include curb opening style and area-inlet style, as necessary. Siltsacks shall be checked and emptied after each runoff event. Inlets in ring road shall be serviced during non-business hours to minimize business disruption and traffic risk to workers and motorists.  
 4. Contractor shall ensure all construction equipment is cleaned prior to entering work site.  
 5. Contractor shall install concrete washouts on site as needed. Urban concrete washouts are permitted but shall be maintained/replaced as needed. All washout materials and un-evaporated water shall be removed from site. No fluids shall escape to receiving waters.  
 6. Whenever sediment is transported onto the highway, the road shall be cleaned as needed. Street washing will not be allowed. Storm drain inlet protection shall be in place prior to shoveling or sweeping. Street cleaning will not be paid for separately.  
 7. Containment and cleanup of equipment fuel, oil and lubricant leaks:  
 Contractor shall inspect and certify equipment and vehicles daily to ensure petroleum, oils, and lubricants (POL) are not leaking onto the soil or pavement. Absorbent material or containers approved by the Engineer shall be used to prevent leaking POL from reaching the soil or pavement. Contractor shall have ready approved absorbent material or containers of sufficient capacity to contain any leak POL that can reasonably be foreseen. All materials resulting from POL leakage control and cleanup shall be property of the Contractor and removed from the site. The cost for control and cleanup of POL leaks shall not be paid for separately, but shall be included in the cost of the work.  
 After Construction (Permanent Measures)  
 1. Landscaping / Seeding: All designated areas shall be hydroseeded as per plans and project specifications.  
**Maintenance**  
 1. The Contractor shall conduct routine checks of all erosion control measures to determine if repairs or sediment removal is necessary.  
 2. After each rainfall or moderate snow melt, erosion control measures are to be checked. The Contractor is responsible for maintaining all erosion control measures.  
 3. Silt and sediment shall be removed after each substantial rainfall. Deposits must be removed when they reach a height of one-half of the barrier.  
 4. When temporary measures are to be removed, any silt and sediment deposits shall be removed and spread evenly in open areas and seeded as necessary.  
 5. Contractor shall make routine inspections and adjustments/modifications to the stormwater management plan to accommodate construction practices and ensure sediment is not bypassing control measures or otherwise leaving or being removed from the site.  
**General Notes**  
 1. At all times during construction, erosion and sediment control shall be maintained by the Contractor.  
 2. Details shown are schematic only. Adjust as necessary to fit field conditions.  
 3. Erosion logs shall be placed to avoid runoff flowing between, around or under logs. Bales shall be anchored with sand bags, masonry blocks or other suitable measures.  
 4. The Contractor shall have a water truck available at all times to assist in controlling dust and wind erosion.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALE
REVISION			JAH	01/2009	NTS
REVISION					
REVISION					



**PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION**

**2009 SEWER REPLACEMENTS STORM WATER MANAGEMENT PLAN**