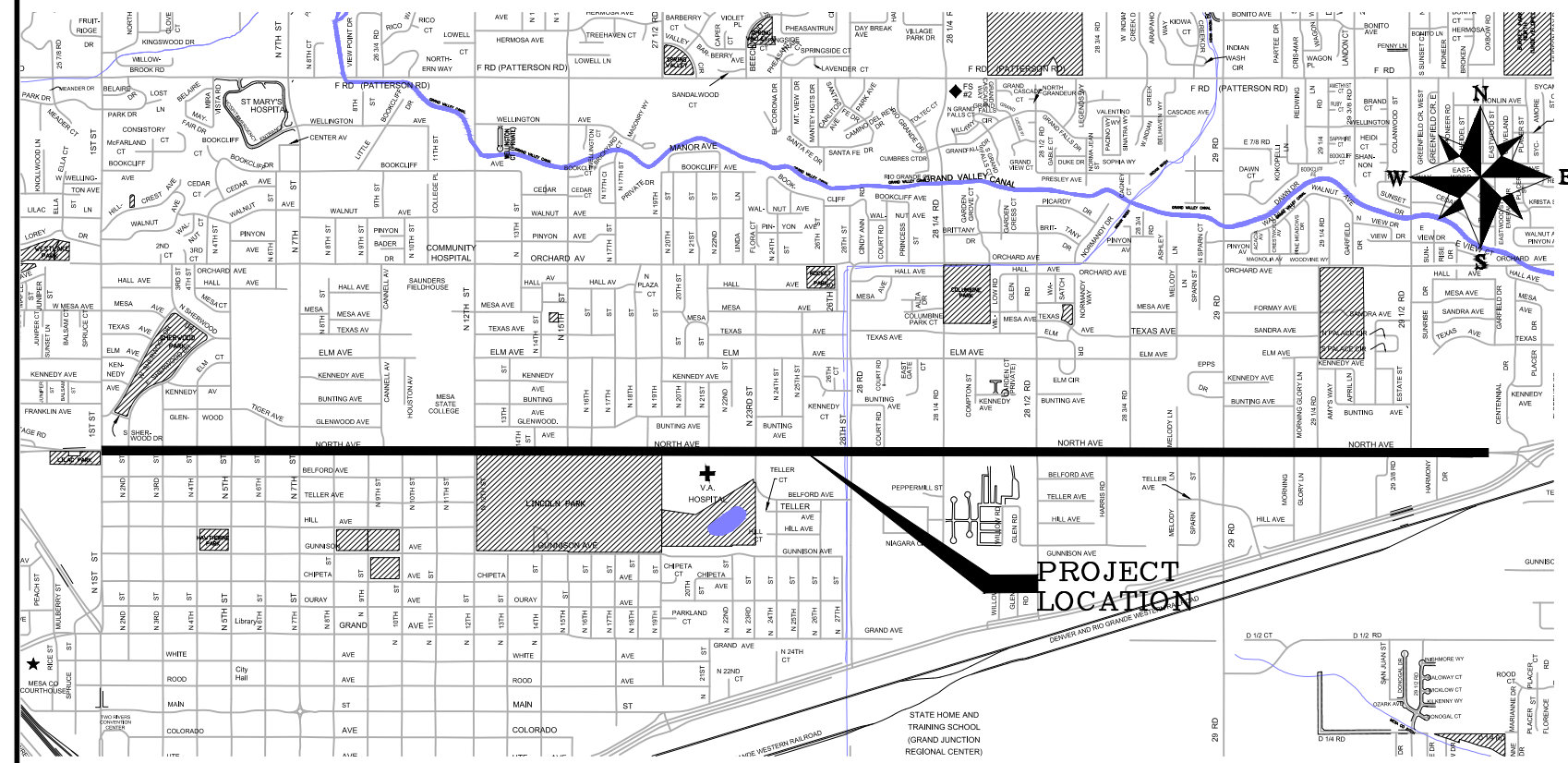
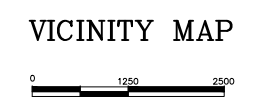


# CITY OF GRAND JUNCTION 2021 NORTH AVE SEWER IMPROVEMENT August 23, 2021



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UTILITIES AND AGENCIES								
AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX
CITY OF GRAND JUNCTION	ANNA PURTSCHER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 244-1559	(970) 256-4022
CHARTER / SPECTRUM	JEFF VALDEZ	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8750	(970) 245-6803
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 Blichmann Ave	2524 Blichmann Ave	GRAND JCT., CO 81504	(970) 244-5311	(970) 240-4349
UTE WATER	DAVID PRISKE	DISTRICT ENGINEER	WATER	2190 H 1/4 ROAD	2190 H 1/4 ROAD	GRAND JCT., CO 81505	(970) 256-2876	(970) 260-1408
XCEL	TILLMON MCSCHOOLER	DESIGNER	ELECTRIC & GAS	2538 Blichmann Ave	2538 Blichmann Ave	GRAND JCT., CO 81506	(970) 244-2695	(970) 244-2664
XCEL	SARAH DARRICAU	UNIT MANAGER	GAS	2538 Blichmann Ave	2538 Blichmann Ave	GRAND JCT., CO 81506	(970) 244-2656	(970) 244-2656

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 Δ REV 1		
REVISION Δ REV 2		
REVISION Δ REV 3		
REVISION Δ REV 4		



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



## Public Works Engineering Division

**ABBREVIATIONS**

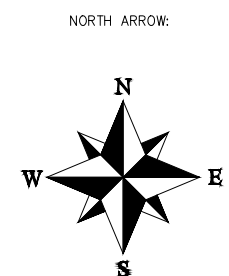
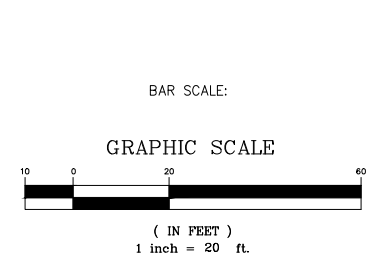
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	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
C	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
DI	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
F	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
HDPE	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
SSUJ	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
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	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		PROPOSED CONCRETE CURB AND GUTTER	
BSWMP ANCHORED STRAW BALES		PROPOSED CONCRETE CURB, GUTTER, & SIDEWALK	
BSWMP SILT FENCE		PROPOSED CONCRETE SIDEWALK	
BUILDING		PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN)	
CONCRETE CURB AND GUTTER		ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE	
CONCRETE CURB, GUTTER, & SIDEWALK		RAIL ROAD	
CONCRETE DITCH		RETAINING WALL	
CONCRETE SIDEWALK		STRIPING (CONTINUOUS WHITE)	
CULVERT		STRIPING (DASHED WHITE)	
EARTH DITCH		STRIPING (CONTINUOUS YELLOW)	
EDGE OF GRAVEL		STRIPING (DASHED YELLOW)	
EDGE OF PAVEMENT		TOP OF SLOPE	
FENCE (HT & MATL NOTED)		CONTOUR LINES (SHOWN BETWEEN TOP & TOE)	
GUARD RAIL		TOE OF SLOPE	
HATCHING: INDICATES ASPHALT REMOVAL		TRAFFIC DETECTOR LOOP	
HATCHING: INDICATES CONCRETE REMOVAL		UTILITY LINE (ABANDON) (THIS CASE A WATER LINE)	
HATCHING: INDICATES STAGING AREA		UTILITY LINE (CABLE TV)	
LINE (CENTER OF IMPROVEMENTS)		UTILITY LINE (ELECTRIC)	
LINE (CITY LIMITS)		UTILITY LINE (FIBER OPTIC)	
LINE (CONTROL)		UTILITY LINE (GAS)	
LINE (EASEMENT)		UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER)	
LINE (MONUMENT/SECTION)		UTILITY LINE (OVERHEAD POWER)	
LINE (PROPERTY)		UTILITY LINE (OVERHEAD TELEPHONE)	
LINE (RIGHT OF WAY)		UTILITY LINE (SANITARY SEWER)	
MATCH LINE		UTILITY LINE (SANITARY SEWER FORCE MAIN)	
PIPE (IRRIGATION)		UTILITY LINE (SANITARY SEWER SERVICE)	
PIPE (SIPHON)		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	



REVISION Δ REV 1	DESCRIPTION	DATE	DRAWN BY HMC	DATE 2021
REVISION Δ REV 2			DESIGNED BY HMC	DATE 2021
REVISION Δ REV 3			CHECKED BY AP	DATE 2021
REVISION Δ REV 4			APPROVED BY AP	DATE 2021

SEE PLAN FOR SCALE INFO



**PUBLIC WORKS ENGINEERING DIVISION**  
PROJECT NO. F0016-F001641

**2021 NORTH AVE SEWER IMPROVEMENT**  
**STANDARD ABBREVIATIONS LEGENDS AND SYMBOLS**  
August 23, 2021

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STRUCTURES						STRUCTURES						STRUCTURES					
#	MH ID	BRICK RISER DEPTH - Replace with LadTech HDPE Grade Rings	FIX INVERTS - Reconstruct using Megamix II with Bio-San	REPLACE MH	SHEET	#	MH ID	BRICK RISER DEPTH - Replace with LadTech HDPE Grade Rings	FIX INVERTS - Reconstruct using Megamix II with Bio-San	REPLACE MH	SHEET	#	MH ID	BRICK RISER DEPTH - Replace with LadTech HDPE Grade Rings	FIX INVERTS - Reconstruct using Megamix II with Bio-San	REPLACE MH	SHEET
1	E1-292-014	Unknown - estimate 20"			6	22	E1-281-082	10"			5	43	D4-282-016	17"			5
2	E1-292-013	6"			6	23	E1-281-046	14"			5	44	D4-282-022	8"			5
3	E1-291-034	Unknown - estimate 20"			6	24	E1-281-038	3"			5	45	D4-282-033	Unknown - estimate 20"			5
4	E1-291-033	Unknown - estimate 20"			6	25	E1-281-035	12"			5	46	D4-282-042	Unknown - estimate 20"			5
5	E1-291-032	Unknown - estimate 20"			6	26	E1-281-023	11"			5	47	D4-282-050	9"			6
6	E1-291-031	Unknown - estimate 20"			6	27	E1-281-015	18"			5	48	D4-282-067	Unknown - estimate 20"			6
7	E1-291-030	8"			6	28	E1-262-075			Y	4	49	D4-291-001	Unknown - estimate 20"			6
8	E1-291-029	Unknown - estimate 20"			6	29	E1-262-070	10"			4	50	D4-291-005	15"			6
9	E1-291-018	9"			6	30	E1-262-059			Y	4	51	D4-291-014	16"			6
10	E1-291-017	12"			6	31	E1-262-047	6"			4	52	D4-291-013	10"			6
11	E1-291-016	10"			6	32	E1-261-044	Unknown - estimate 20"			4	53	D4-291-012	20"			6
12	E1-291-006	Unknown - estimate 20"			6	33	E1-261-038	9"			4	54	D4-291-011	15"			6
13	E1-282-056	8"			6	34	E1-261-026	14"	Y		4	55	D4-291-010	20"			6
14	E1-282-045	8"			6	35	E1-261-013	12"	Y		4	56	D4-291-009	11"			6
15	E1-282-032	5"			5	36	E1-261-008			Y	4	57	D4-291-008	22"			6
16	E1-282-021	17"			5	37	D4-281-012	10"			5	58	D4-292-004	13"			6
17	E1-282-019	11"			5	38	D4-281-015	7"			5	59	D4-202-003	11"			6
18	E1-282-013	11"			5	39	D4-281-027	18"			5	60	D4-292-002	Unknown - estimate 20"			6
19	E1-281-108	15"			5	40	D4-281-044	8"			5	61	D4-292-001	17"			6
20	E1-281-102	7"			5	41	D4-281-046	12"			5						
21	E1-281-094	17"			5	42	D4-281-051	14"			5						

EXISTING PIPE REPAIRS						
#	PIPE ID	Reference Manhole	Repair Start (ft East of Reference Manhole)	Repair End (ft East of Reference Manhole)	SHEET FOR LOCATION	SHEET FOR DETAIL
1	E1-291-041	E1-291-034 (MH 3)	5.75	11.75	6	7
2	E1-282-056	E1-282-045 (MH 14)	7	13	6	7
3	E1-282-045	E1-282-032 (MH 15)	4.5	10.5	5	7
4	E1-281-070	E1-281-074*	25.5	31.5	5	7
5	E1-281-070	E1-281-074*	232	238	5	8
6	D4-281-012	D4-281-001*	25	31	5	8
7	E1-281-015	E1-281-004*	27	33	5	8
8	E1-261-044	E1-261-044 (MH 32)	58	68	4	8

\* Refer to City GIS for Manhole location, if needed

REVISION	DESCRIPTION	DATE
REVISION A REV 1		
REVISION B REV 2		
REVISION C REV 3		
REVISION D REV 4		

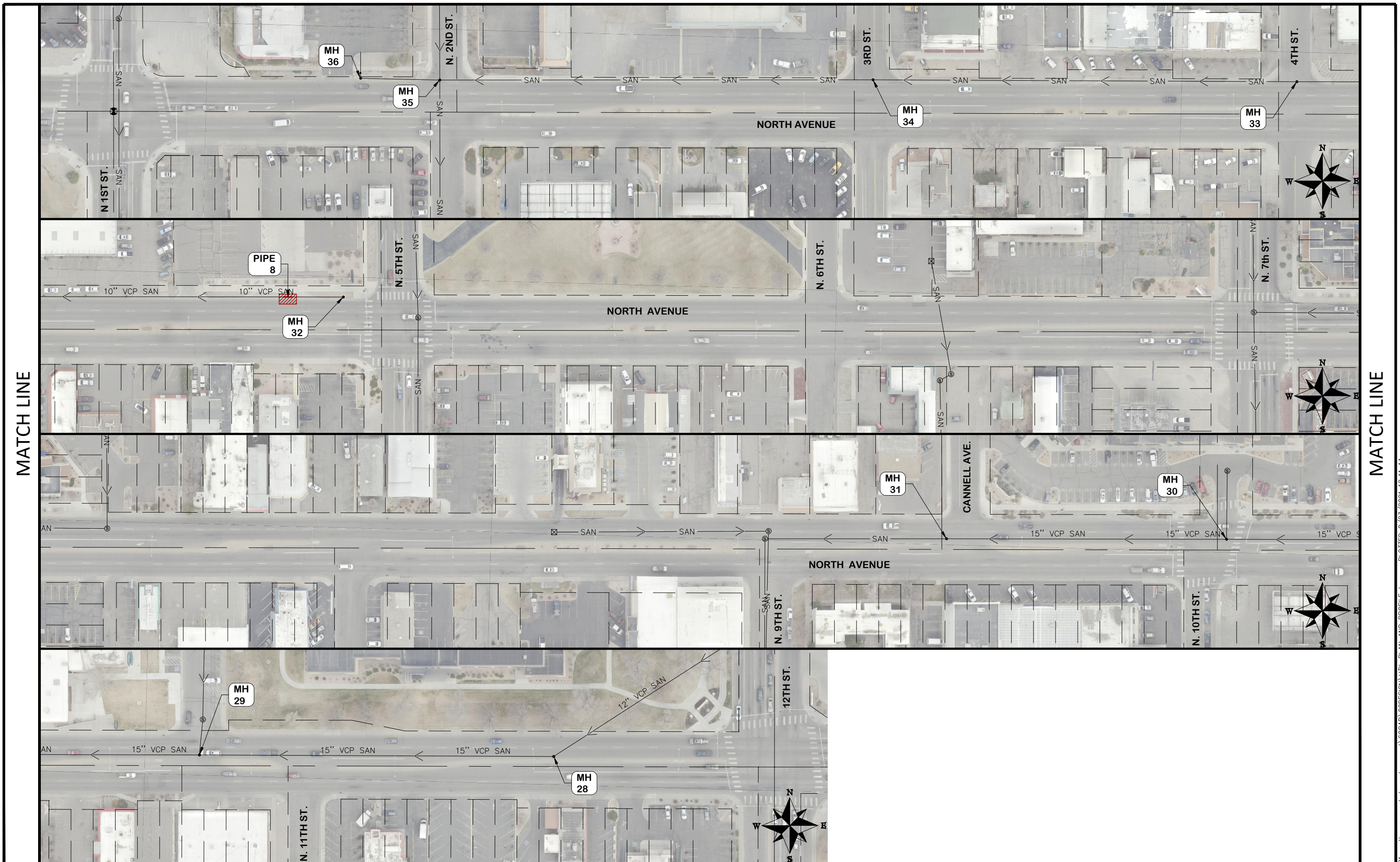
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DESIGNED BY	HMC	DATE	2021
CHECKED BY	AP	DATE	2021
APPROVED BY	AP	DATE	2021

SCALE



**PUBLIC WORKS  
ENGINEERING DIVISION**  
PROJECT NO. F0016-F001641

**2021 NORTH AVE SEWER IMPROVEMENT  
MANHOLE SPECS**  
August 23, 2021

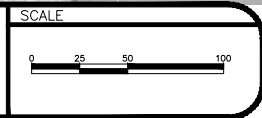


MATCH LINE

MATCH LINE

REVISION	DESCRIPTION	DATE
REVISION Δ REV 1		
REVISION Δ REV 2		
REVISION Δ REV 3		
REVISION Δ REV 4		

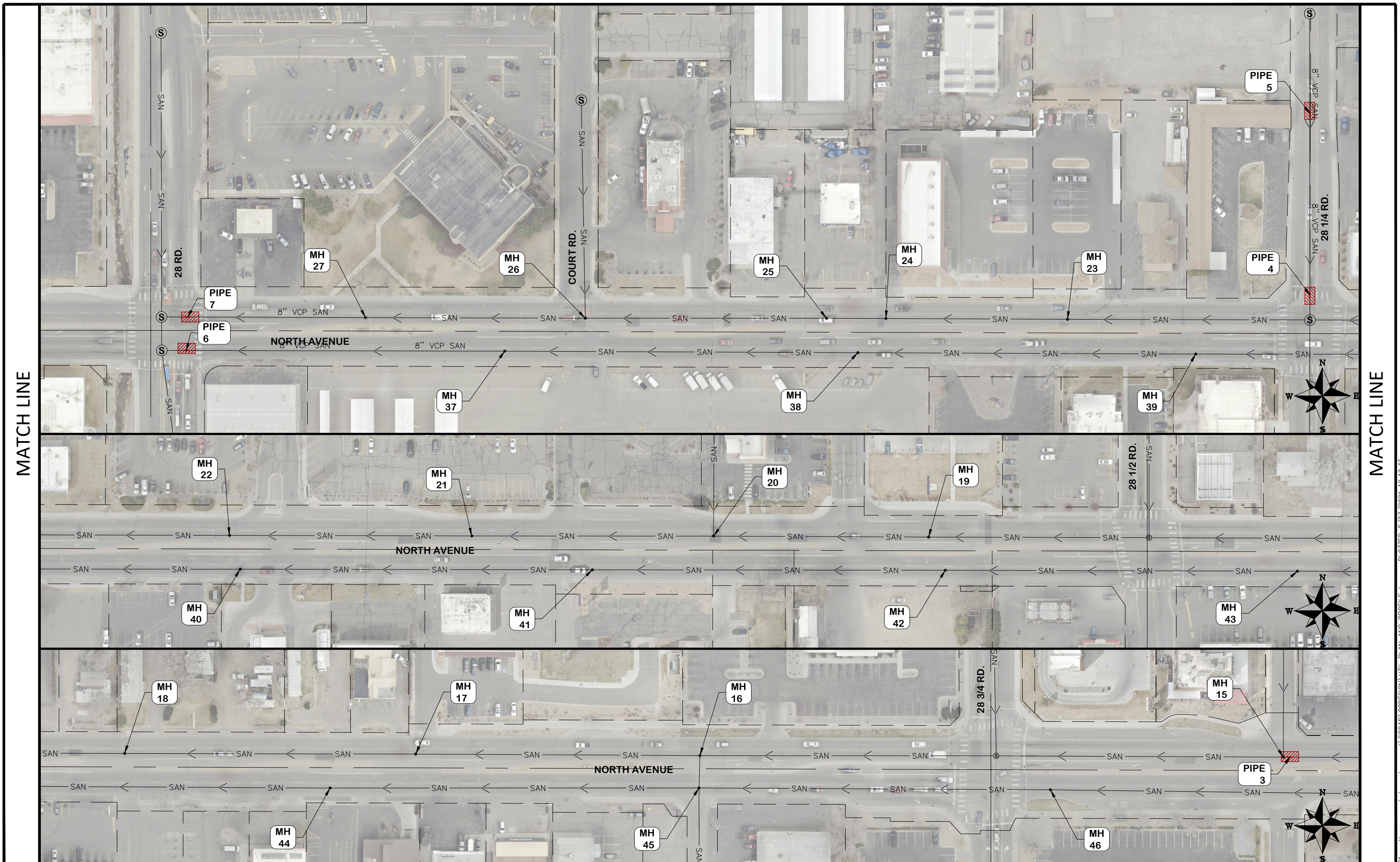
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PUBLIC WORKS  
ENGINEERING DIVISION  
PROJECT NO. F0016-F001641

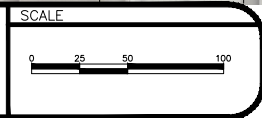
2021 NORTH AVE SEWER IMPROVEMENT  
MANHOLE LOCATIONS - 1  
August 23, 2021

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REVISION Δ REV 2			HMC	2021
REVISION Δ REV 3			AP	2021
REVISION Δ REV 4			AP	2021

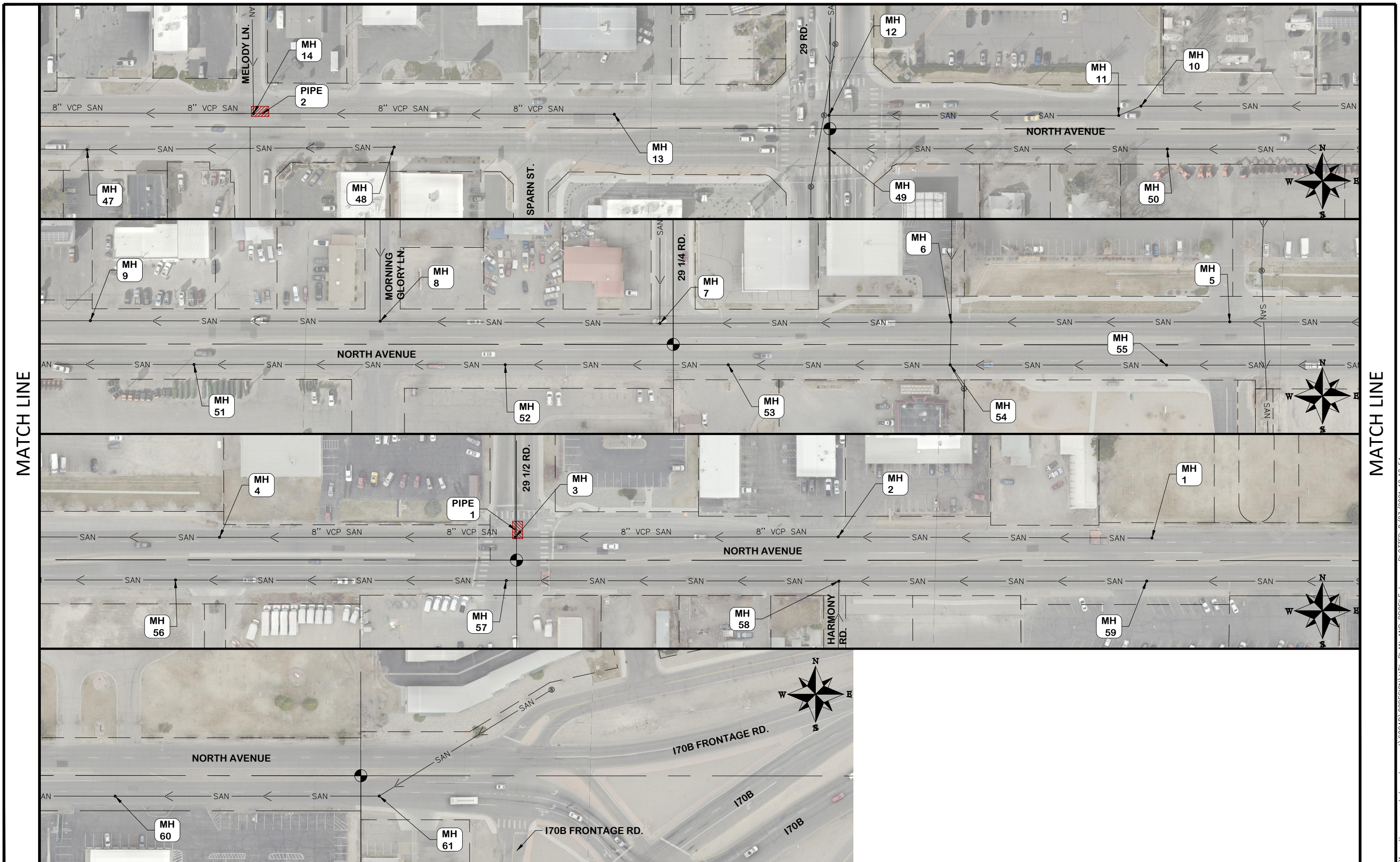
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**PUBLIC WORKS  
ENGINEERING DIVISION**  
PROJECT NO. F0016-F001641

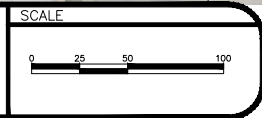
**2021 NORTH AVE SEWER IMPROVEMENT  
MANHOLE LOCATIONS - 2**  
August 23, 2021

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REVISION Δ REV 2		- DATE
REVISION Δ REV 3		- DATE
REVISION Δ REV 4		- DATE

DRAWN BY	HMC	DATE	2021
DESIGNED BY	HMC	DATE	2021
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APPROVED BY	AP	DATE	2021



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PROJECT NO. F0016-F001641

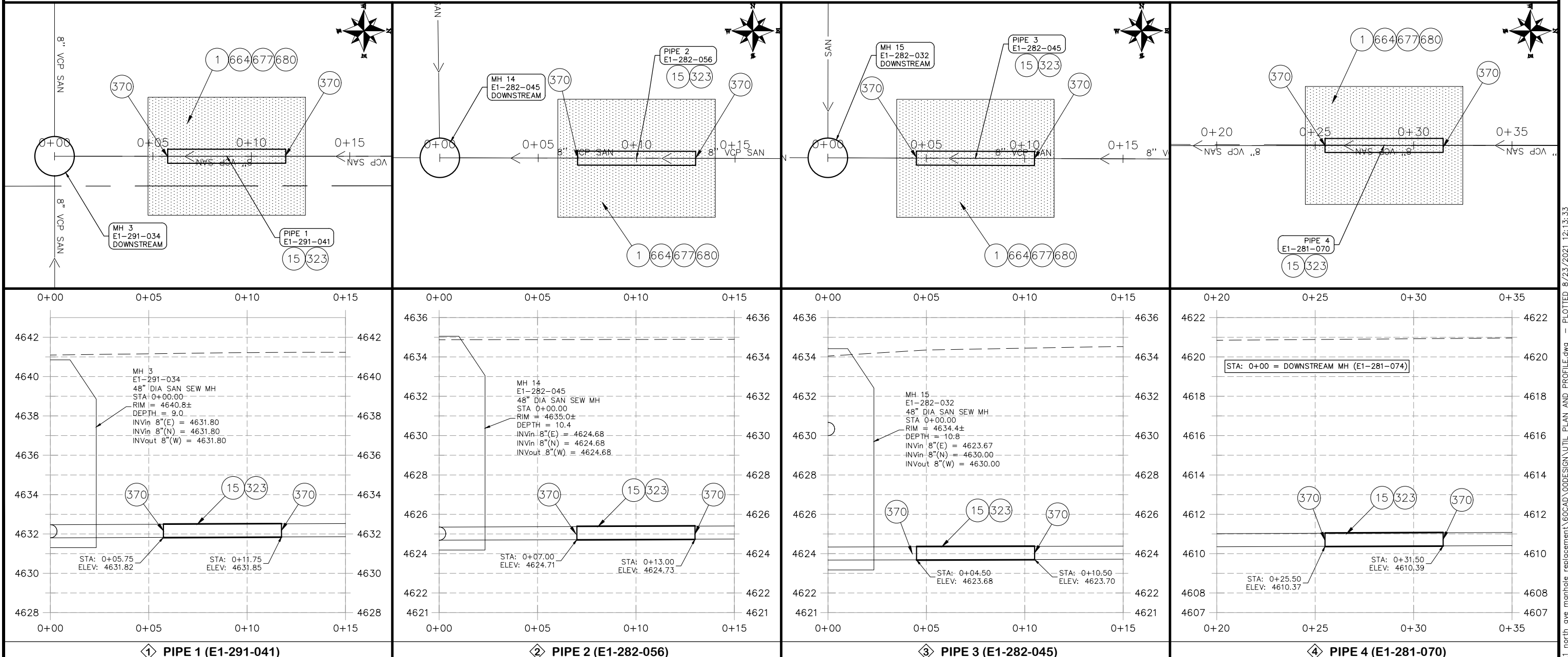
**2021 NORTH AVE SEWER IMPROVEMENT  
MANHOLE LOCATIONS - 3**  
August 23, 2021

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**CONSTRUCTION NOTES**

- ① 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- ⑮ 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
- ③②③ 102.9/108.2 - 8" 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.
- ③⑦① 108.3 - CONNECT TO EXISTING SEWER PIPE USING MAXADAPTOR OR ENGINEER APPROVED EQUAL. CONTRACTOR TO VERIFY THAT EXISTING PIPE OUTER DIAMETERS CORRESPOND TO MAXADAPTOR SPECIFICATIONS.
- ⑥⑥④ 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
- ⑥⑦⑦ 401.08 - HOT BITUMINOUS PAVEMENT (4" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (TWO 2" LIFTS)
- ⑥⑧① 401.08 - HOT BITUMINOUS PAVEMENT (2" THICK)(12" T-TOP PATCHING)(SEE CITY STD. DETAIL GU-03) (GRADING SX, BINDER GRADE PG 64-22, GYR=75)(ONE 2" LIFT TOP MAT) (PAID PER TON)

PIPELINE ELEVATIONS OBTAINED FROM AS-BUILTS AND SHALL BE VERIFIED BY CONTRACTOR



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REV 1			HMC	2021
REV 2			HMC	2021
REV 3			AP	2021
REV 4			AP	2021

SCALES:
PLAN & PROFILE
1" = 25'
1" = 5'



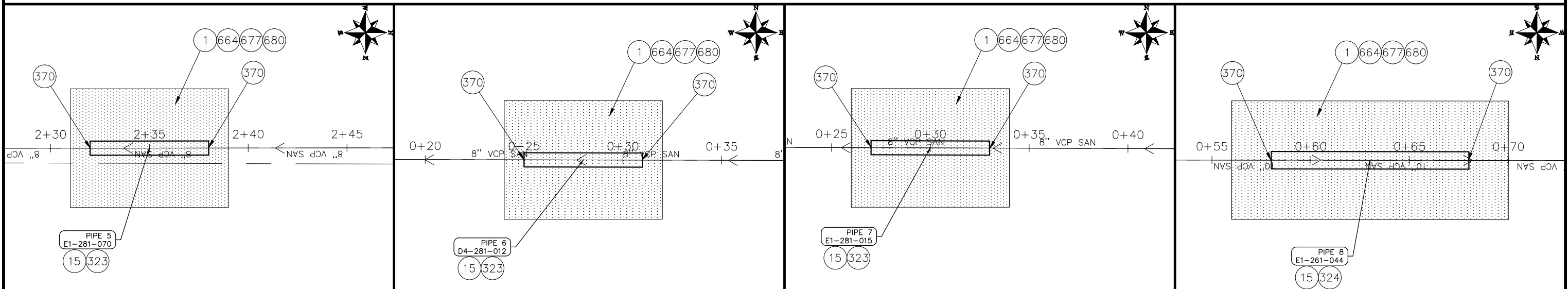
**PUBLIC WORKS ENGINEERING DIVISION**  
 PROJECT NO. F0016-F001641

**2021 NORTH AVE SEWER IMPROVEMENT PIPE REPAIR PLAN & PROFILES 1**  
 August 23, 2021

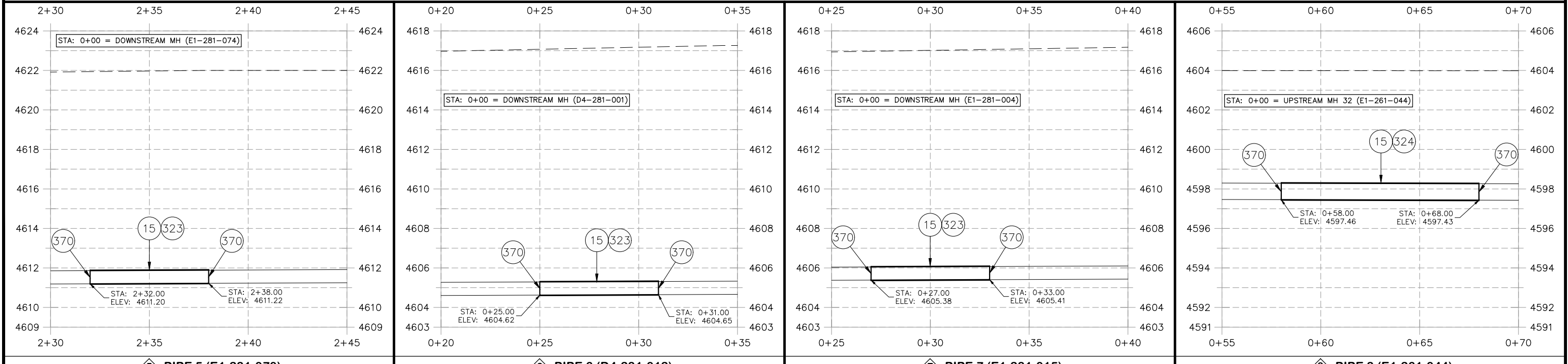
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**CONSTRUCTION NOTES**

- ① 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- ⑮ 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
- ⑮ 102.9/108.2 - 8" 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.
- ⑮ 102.9/108.2 - 10" 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.
- ⑮ 108.3 - CONNECT TO EXISTING SEWER PIPE USING MAXADAPTOR OR ENGINEER APPROVED EQUAL. CONTRACTOR TO VERIFY THAT EXISTING PIPE OUTER DIAMETERS CORRESPOND TO MAXADAPTOR SPECIFICATIONS.
- ⑮ 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
- ⑮ 401.08 - HOT BITUMINOUS PAVEMENT (4" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (TWO 2" LIFTS)
- ⑮ 401.08 - HOT BITUMINOUS PAVEMENT (2" THICK) (12" T-TOP PATCHING) (SEE CITY STD. DETAIL GU-03) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (PAID PER TON)



PIPELINE ELEVATIONS OBTAINED FROM AS-BUILTS AND SHALL BE VERIFIED BY CONTRACTOR



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REV 1			HMC	2021
REV 2			HMC	2021
REV 3			AP	2021
REV 4			AP	2021

SCALES:
PLAN & PROFILE 1" = 25'
VERTICAL 1" = 5'



**PUBLIC WORKS ENGINEERING DIVISION**  
PROJECT NO. F0016-F001641

**2021 NORTH AVE SEWER IMPROVEMENT PIPE REPAIR PLAN & PROFILES 2**  
August 23, 2021

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**CONSTRUCTION NOTES**

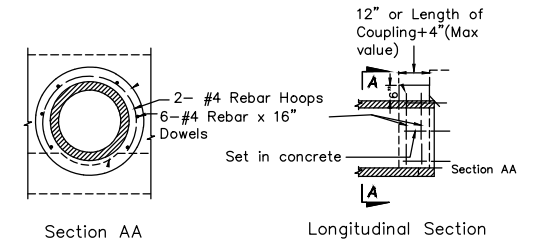
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 10 202 - REMOVAL OF LANDSCAPE GROUND COVER AND ANY UNDERLYING BARRIER. STOCKPILE PER PROPERTY OWNERS RECOMMENDATION.
- 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
- 100 210 - RESET LANDSCAPE GROUND COVER. CONTRACTOR SHALL REMOVE GROUND COVER AND ANY UNDERLYING WEED BARRIER AS NEEDED AND STOCKPILE MATERIALS. CONTRACTOR SHALL RESET THESE MATERIALS AND PROVIDE ADDITIONAL MATERIALS AS NEEDED TO RESTORE LANDSCAPING.
- 500 102.11/108.5 - 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).

- 301 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (60" I.D.). INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- 307 102.11/108.5 - MANHOLE BARREL SECTION (D>5) (60" I.D.).
- 312 102.11/108.5 - MANHOLE INTERIOR CORROSION PROTECTION (PROTECTIVE COATING SHALL BE APPLIED TO PREPARED MANHOLE INVERT, BENCH, BARRELS, AND CONE SECTIONS, MANHOLE INVERTS AND BENCHES SHALL BE COATED PRIOR TO WASTEWATER INTRODUCTION)(100 MIL MINIMUM THICKNESS)
- 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.
- 523 102.9/108.2 - 8" 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.

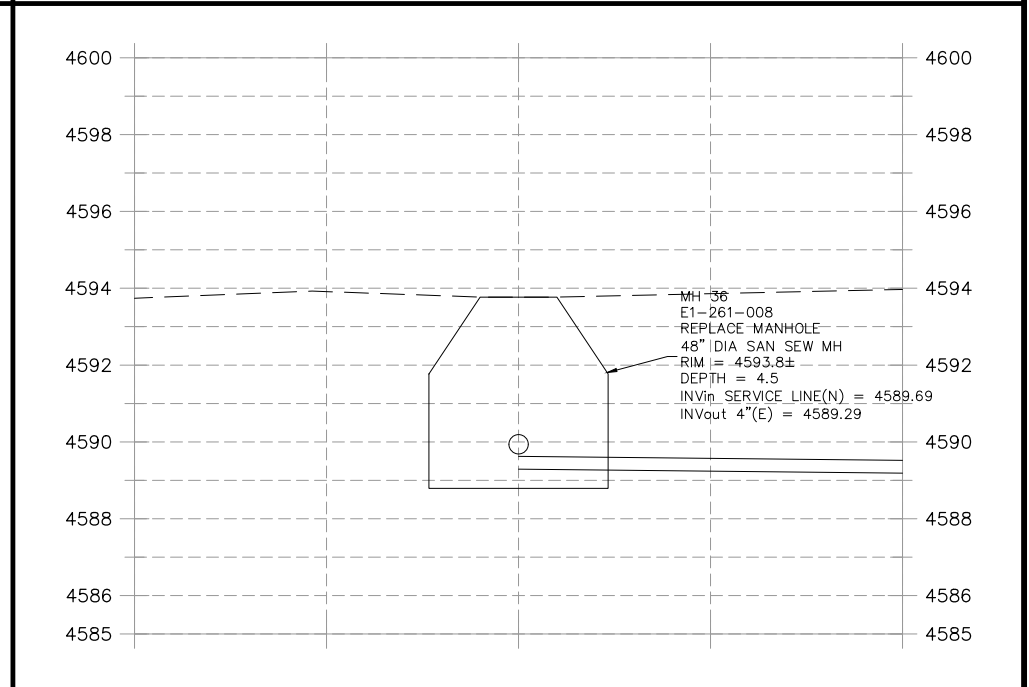
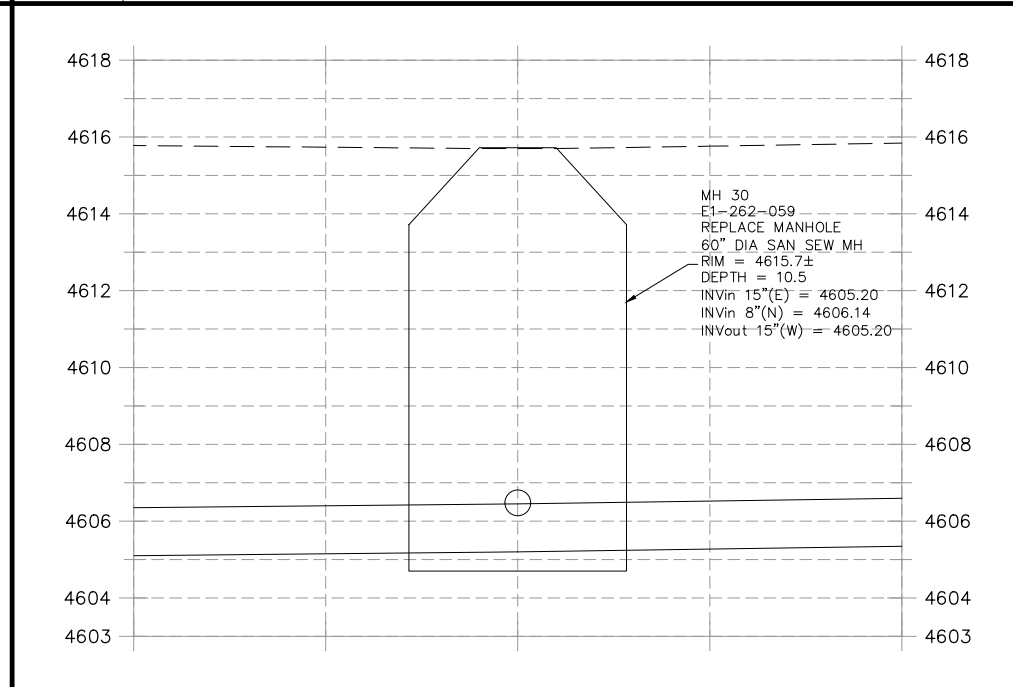
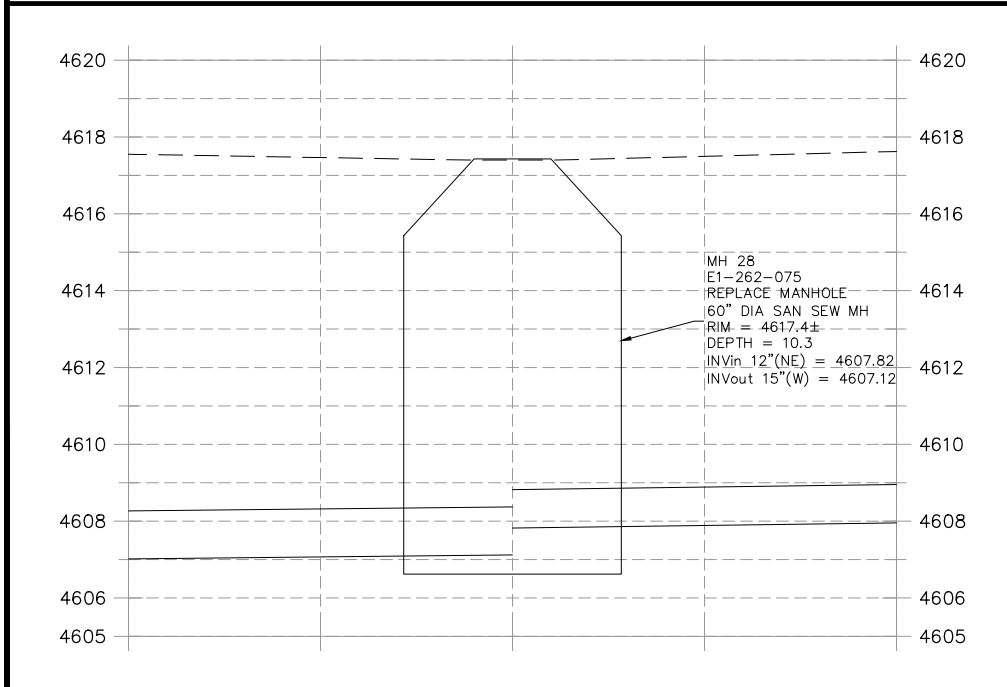
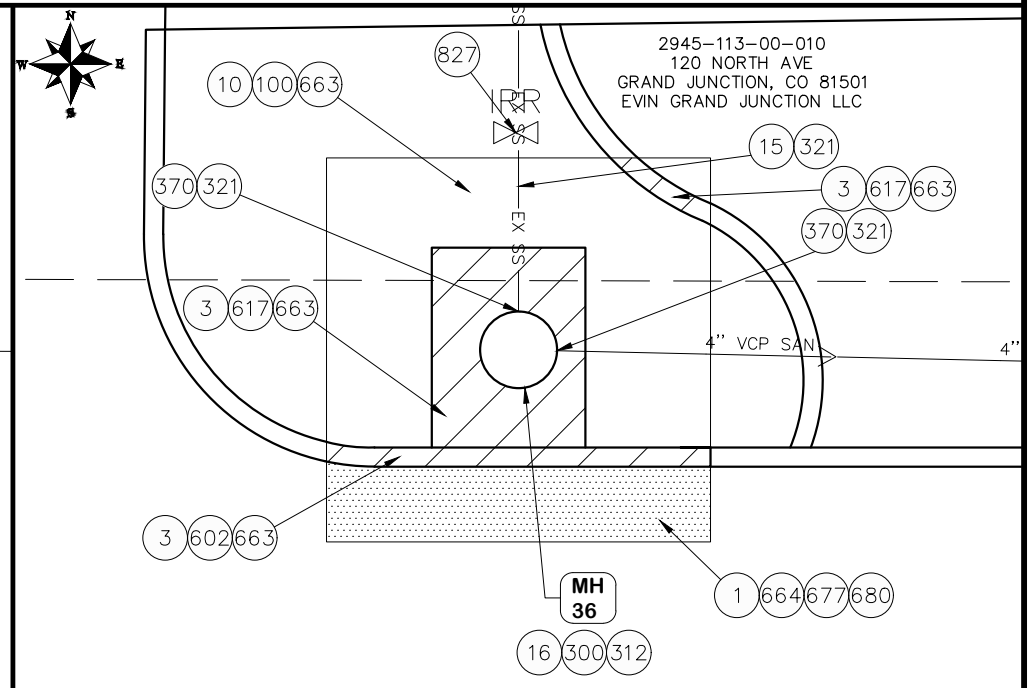
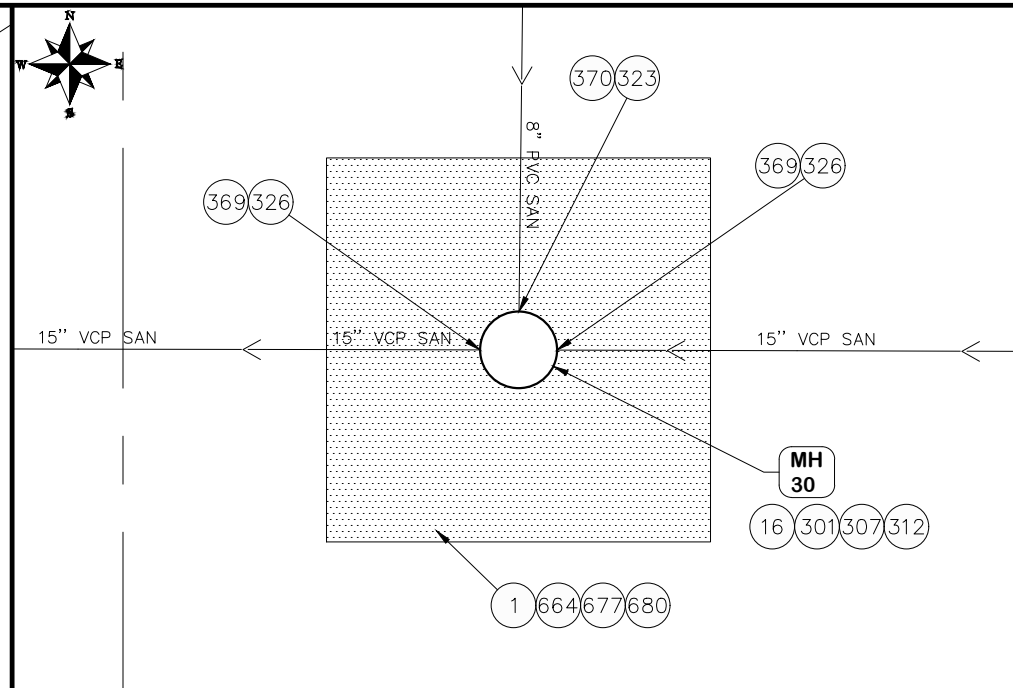
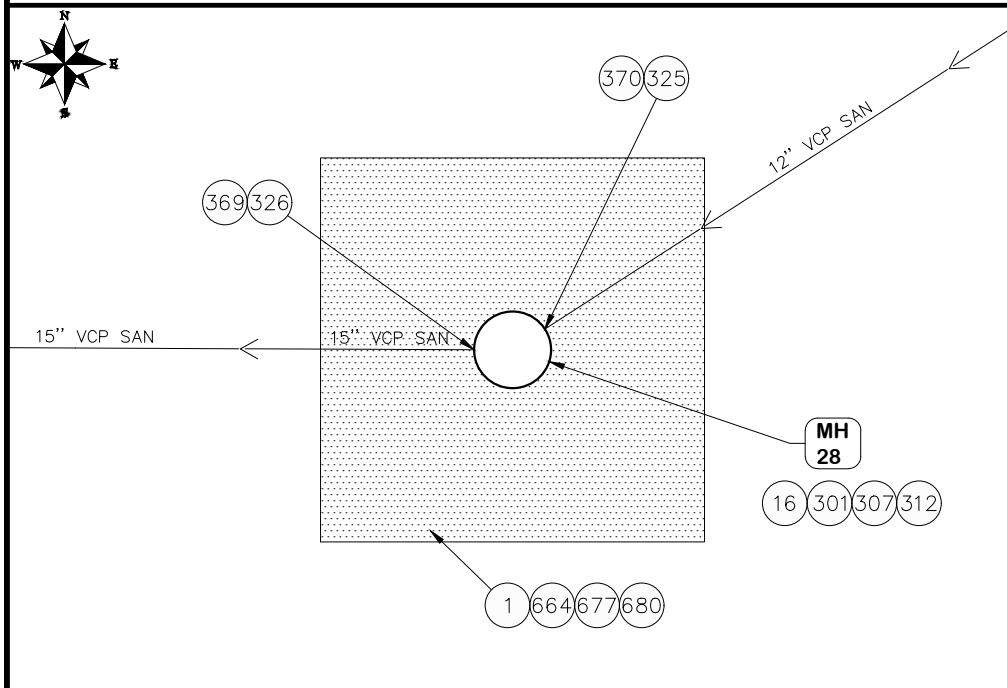
- 525 102.9/108.2 - 12" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 526 102.9/108.2 - 15" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 569 108.3 - USE FERNCO RUBBER COUPLING (REINFORCED WITH CONCRETE COLLAR, SEE SPECIFICATION) TO CONNECT TO EXISTING 15" VCP.
- 570 108.3 - CONNECT TO EXISTING SEWER PIPE USING MAXADAPTOR OR ENGINEER APPROVED EQUAL. CONTRACTOR TO VERIFY THAT EXISTING PIPE OUTER DIAMETERS CORRESPOND TO MAXADAPTOR SPECIFICATIONS.
- 602 608.06 - CONCRETE CURB AND GUTTER (2' WIDE)
- 617 608.06 - UNCOLORED CONCRETE WITH EXPOSED AGGREGATE (3/8" AGGREGATE) (6" THICK)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)

- 664 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
- 677 401.08 - HOT BITUMINOUS PAVEMENT (4" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (TWO 2" LIFTS)
- 680 401.08 - HOT BITUMINOUS PAVEMENT (2" THICK) (12" T-TOP PATCHING) (SEE CITY STD. DETAIL GU-03) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (PAID PER TON)
- 827 PROTECT IRRIGATION VALVE IN PLACE

**Concrete Collar Specification**



Note: Cost of collar construction and materials to be included in the contract price unit for the Fernco Coupling



1 MANHOLE 28

2 MANHOLE 30

3 MANHOLE 36

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALE
REV 1			HMC	2021	1:25 HORIZONTAL
REV 2			HMC	2021	2:5 VERTICAL
REV 3			AP	2021	1:25 HORIZONTAL
REV 4			AP	2021	2:5 VERTICAL



**PUBLIC WORKS ENGINEERING DIVISION**  
PROJECT NO. F0016-F001641

**2021 NORTH AVE SEWER IMPROVEMENT MANHOLE REPLACEMENTS**  
August 23, 2021

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