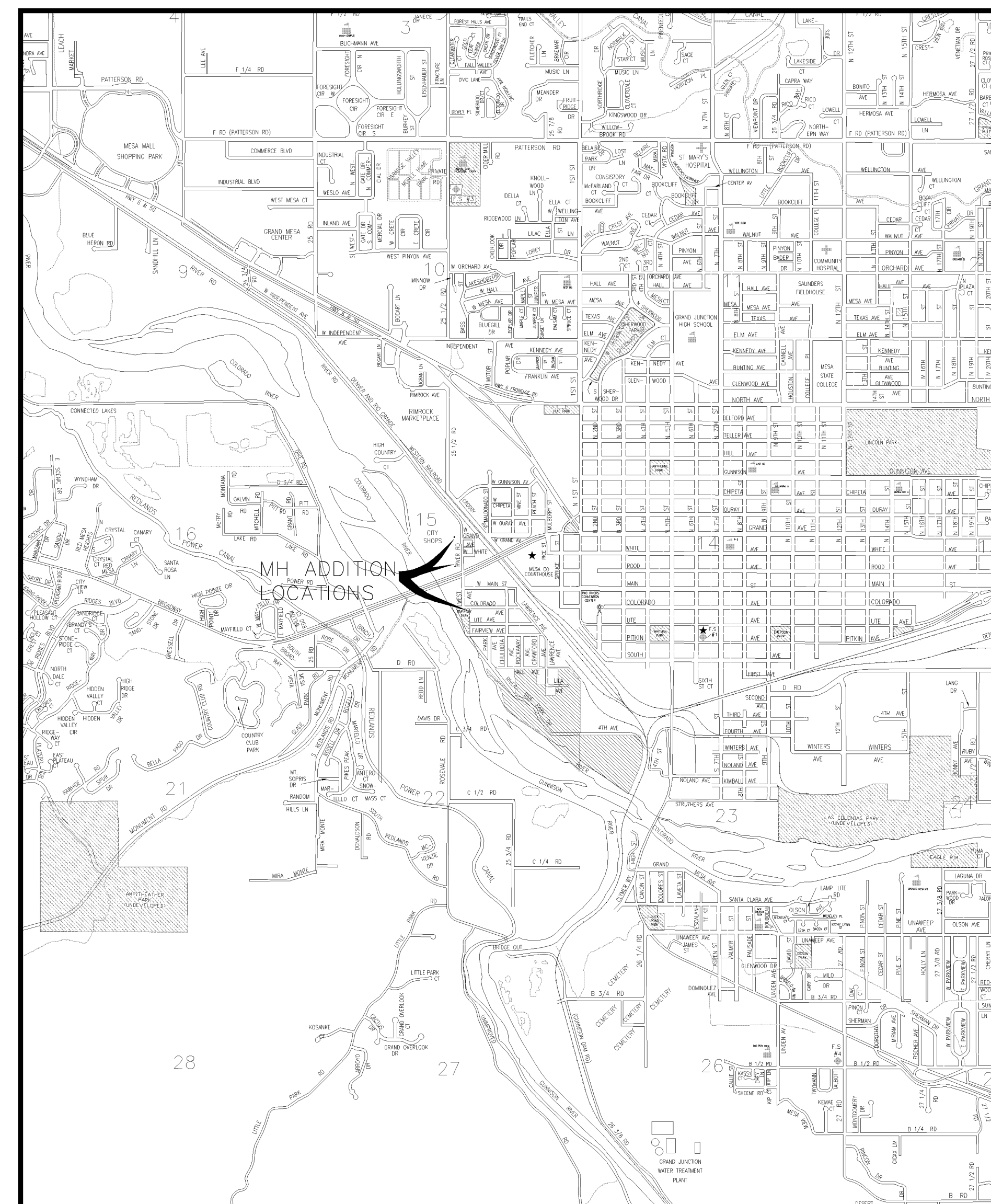


SANITARY SEWER MONITORING MH ADDITIONS MARCH 1, 2007

VICINITY MAP



- 1 ————— Cover Sheet
- 2 ————— Standard Abbreviations, Legend, and Symbols
- 3 ————— Summary of Approximate Quantities
- 4-6 ————— Sanitary Sewer Plan and Profiles

UTILITIES AND AGENCIES								
AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX
GRAND JUNCTION, CITY OF	JUSTIN VENSEL	PROJECT MANAGER	PROJECT MANAGER	250 N. 5th STREET	250 N. 5th STREET	GRAND JCT., CO 81501	(970) 256-4017	(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
GRAND VALLEY IRRIGATION CO.	PHIL BERTRAND		IRRIGATION	688 26 ROAD	688 26 ROAD	GRAND JCT., CO 81506	(970) 242-2762	
BRESNAN	SCOTT WRIGHT	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 263-2313	(970) 245-6803
U.S. WEST/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 81506	(970) 244-2656	(970) 244-2661



*Public Works & Utilities
Engineering Division*

DRAWING STATUS:	
●	PROGRESS
○	FINAL CONSTRUCTION DRAWINGS
○	ASBUILT
DESIGNED BY:	
JUSTIN VENSEL, PROJECT MANAGER	DATE
REVIEWED BY:	
BRET GUILLORY, UTILITY ENGINEER	DATE
AUTHORIZED FOR CONSTRUCTION	
TRENTON C. PRALL, CITY ENGINEER	DATE
ACCEPTED AS CONSTRUCTED	
JUSTIN VENSEL, PROJECT MANAGER	DATE

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.

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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
PCC	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
STAU	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
VPC	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

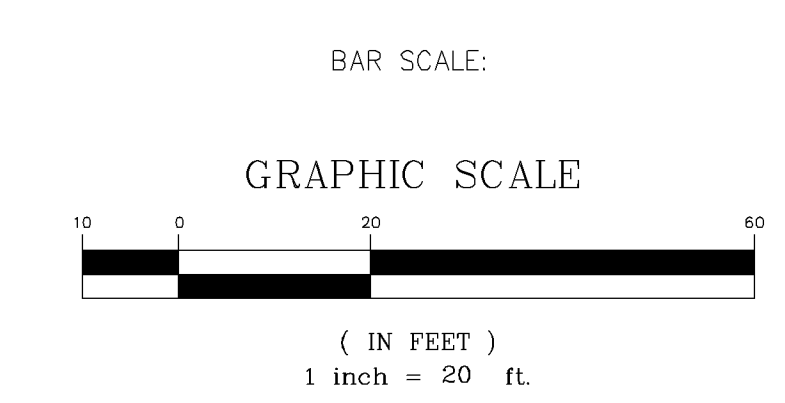
LEGEND

BSWMP DRAINAGE BASIN BOUNDARY	
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 (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)	

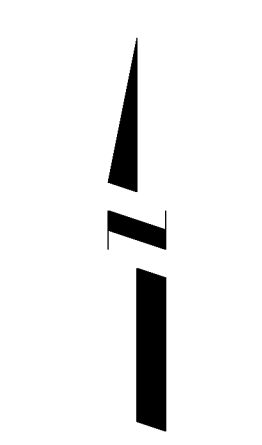
PROPOSED CONCRETE CURB AND GUTTER	
PROPOSED CONCRETE CURB, GUTTER, & SIDEWALK	
PROPOSED CONCRETE SIDEWALK	
PROPOSED \"WET\" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN)	
ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, 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	



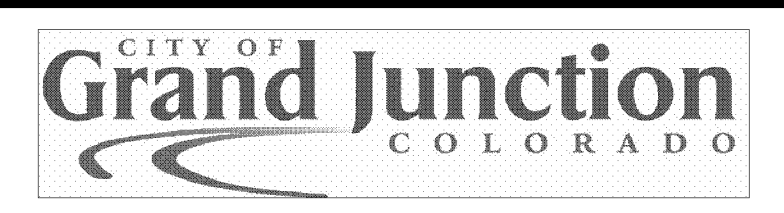
NORTH ARROW:



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



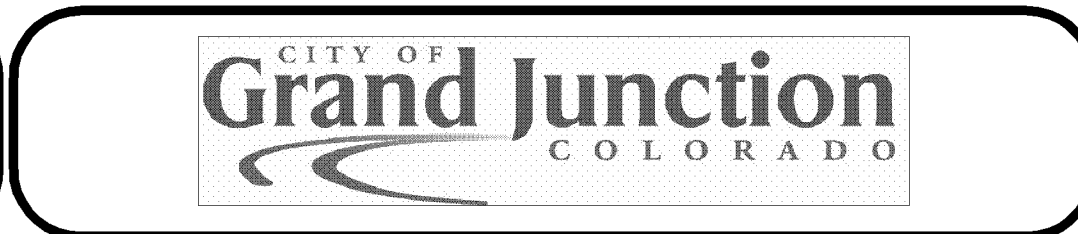
PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

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

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DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE

SCALE
N.T.S.

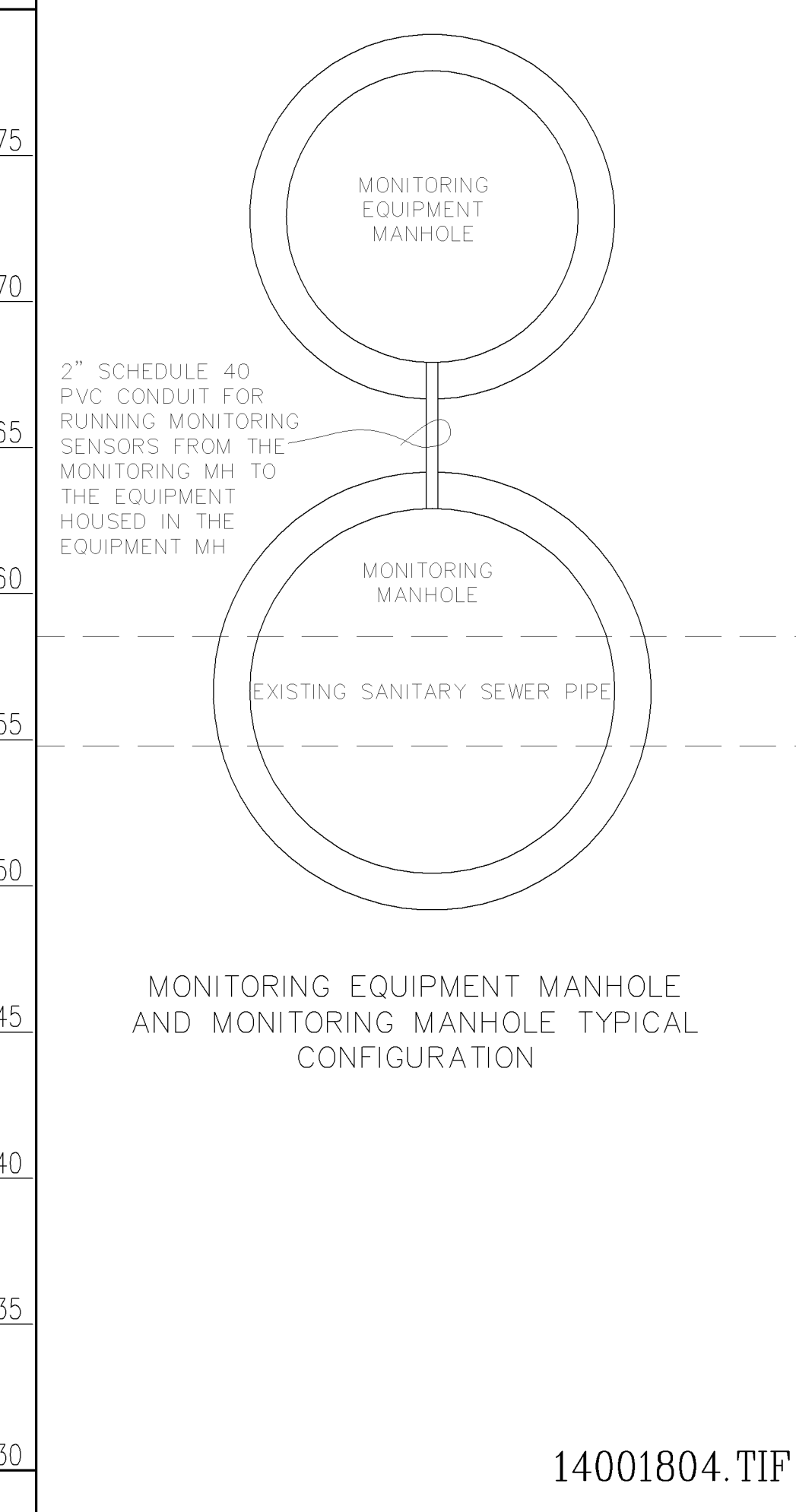
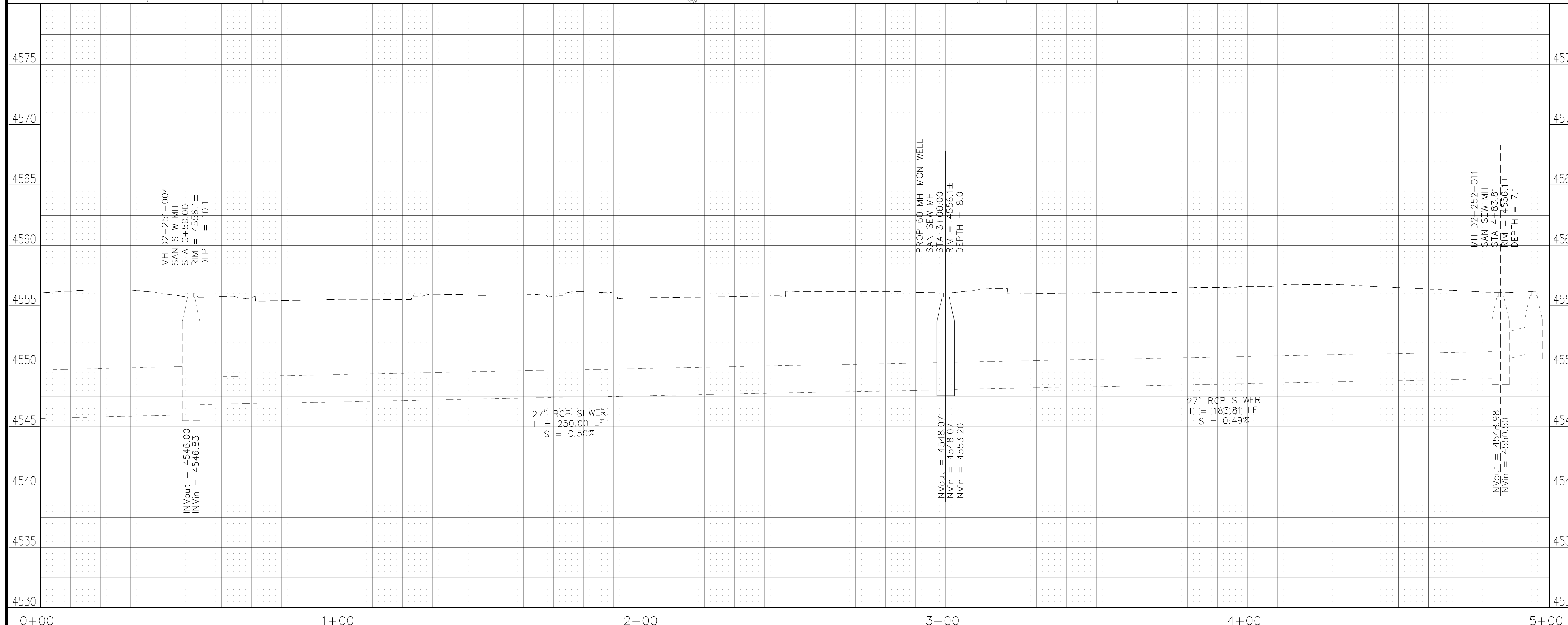
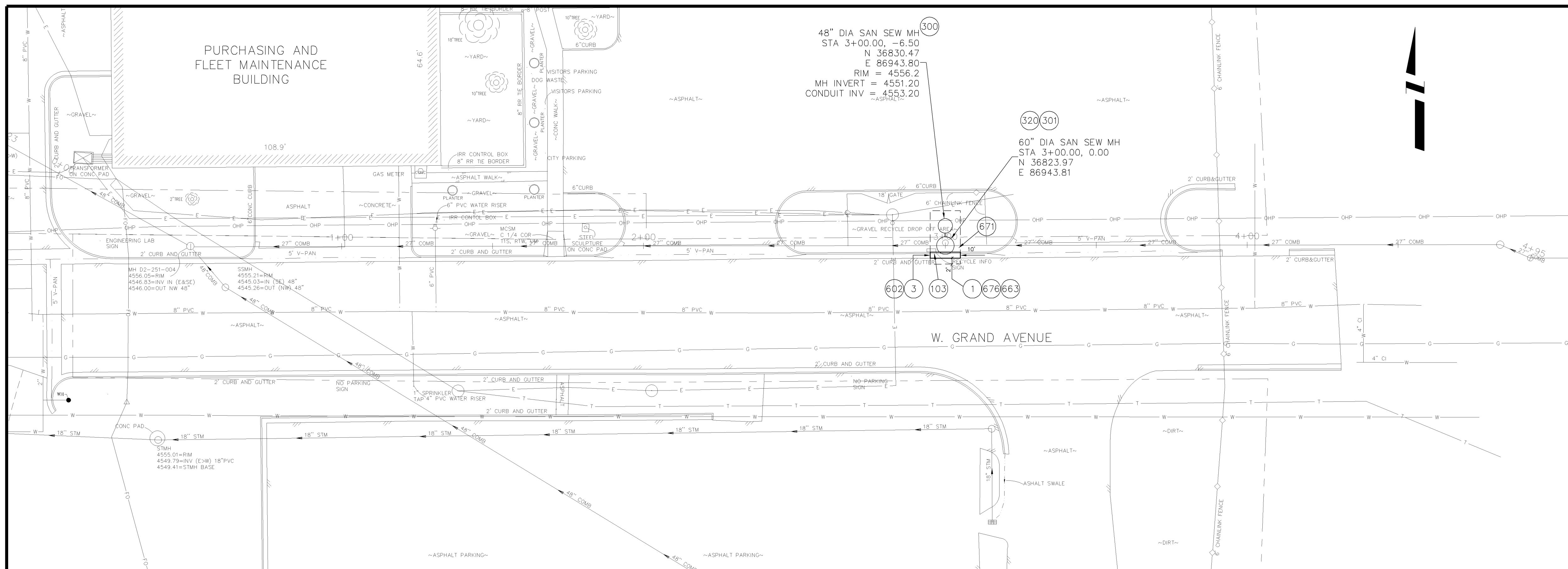


PUBLIC WORKS
AND UTILITIES
ENGINEERING DIVISION

SANITARY SEWER MONITORING MH ADDITIONS
SUMMARY OF APPROXIMATE QUANTITIES

\\sawtooth\p01\WORKING\MS ADDITION\DWG\904-F27100-F27100.dwg, 3/20/07 4:04:08 PM

- 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.
- 103 210 - RESET SIGN.
- 300 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). MONITORING EQUIPMENT MANHOLE. INCLUDES 2" SCHEDULE 40 PVC CONDUIT CONNECTION TO MONITORING MANHOLE. (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).
- 320 102.11 - CONNECT MANHOLE TO EXISTING SANITARY SEWER. CONTRACTOR SHALL USE A CAST-IN-PLACE BASE TO FORM INVERT AROUND THE EXISTING PIPE. "O" RING GASKETS OR OTHER WATER STOPS ARE TO BE PLACED AROUND THE INLET AND OUTLET PIPES TO ENSURE A WATER TIGHT SEAL IS PROVIDED AT THE MH BASE. CARE SHOULD BE TAKEN SO THAT THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE. THE TOP OF THE EXISTING PIPE SHALL BE CUT AND REMOVED TO PROVIDE FOR THE NEW INVERT. CONTRACTOR SHALL CONTROL SEWER FLOW AND NOT ALLOW DEBRIS TO ENTER THE PIPE.
- 602 CONCRETE CURB AND GUTTER (2' WIDE) (BY OTHERS)
- 663 AGGREGATE BASE COURSE (CLASS 6) (6" THICK) (BY OTHERS)
- 671 WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS AND LANDSCAPE AREAS. MATCH EXISTING TYPE. THICKNESS IS 2" MIN. AND 3" MAX. (BY OTHERS)
- 676 HOT BITUMINOUS PAVEMENT (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS) (BY OTHERS)



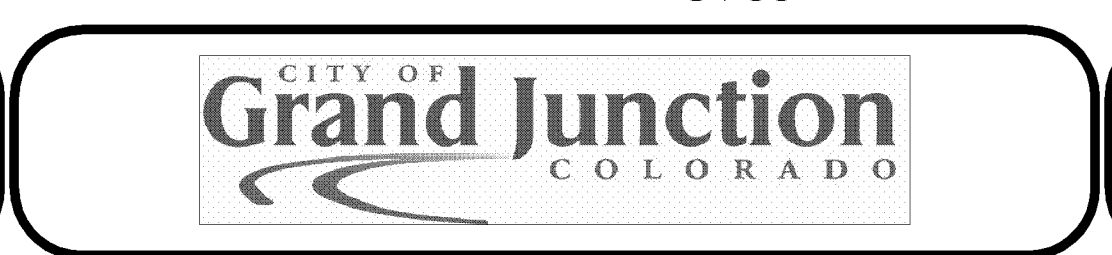
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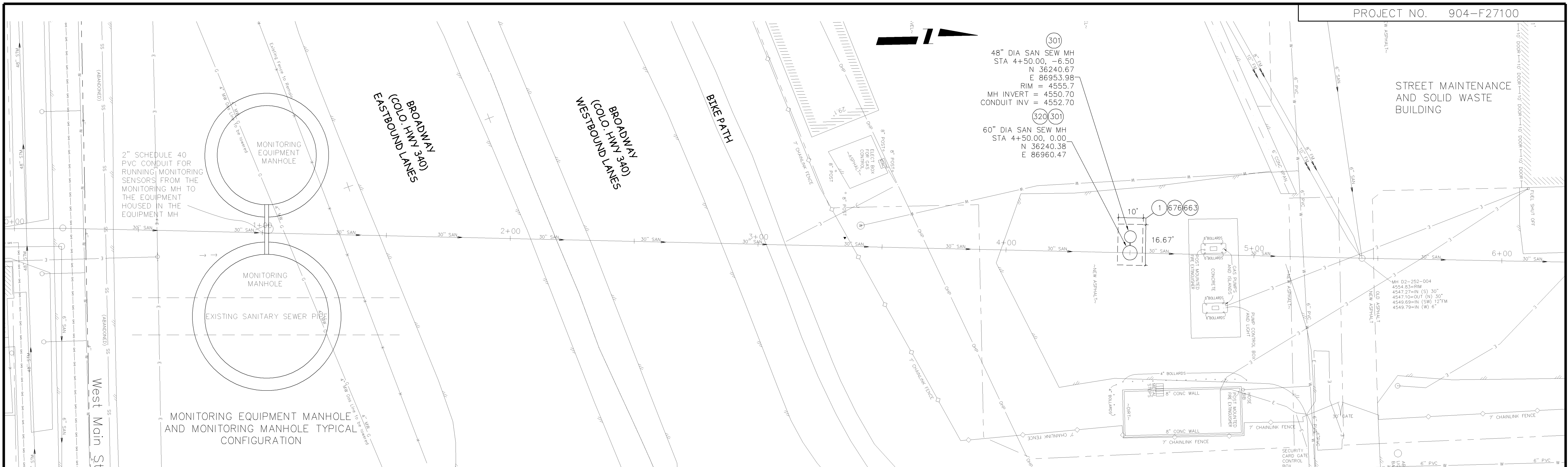
PLAN: 1" = 20'

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



PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

SANITARY SEWER MONITORING MH ADDITIONS W GRAND AVE FROM RIVER RD 185' WEST



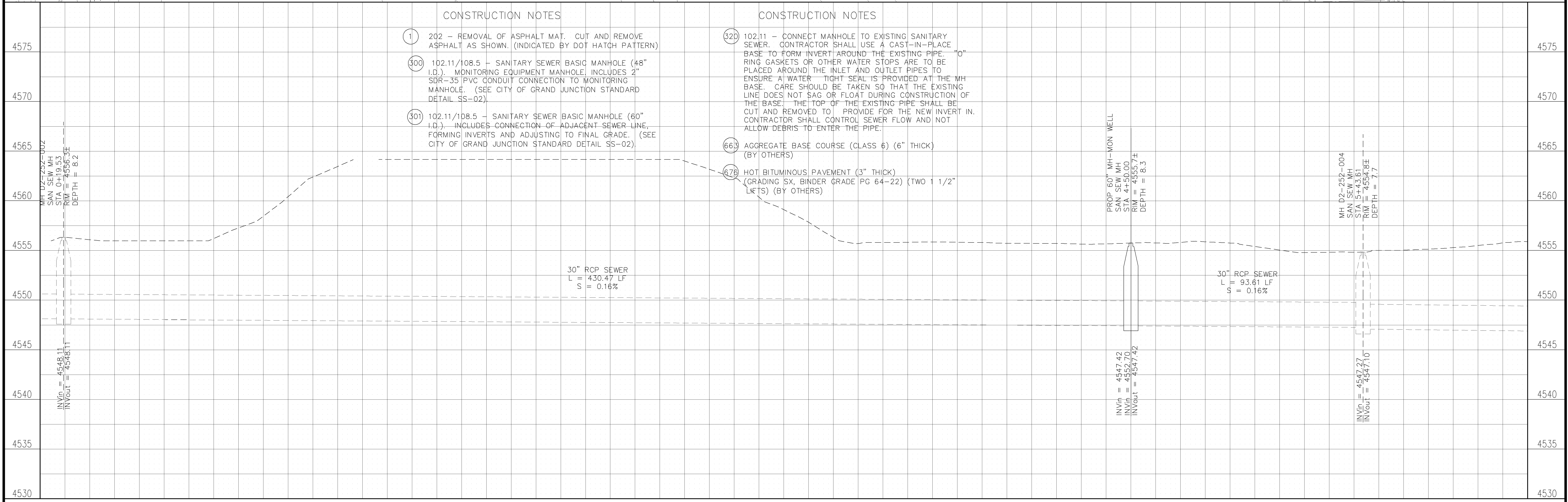
MONITORING EQUIPMENT MANHOLE AND MONITORING MANHOLE TYPICAL CONFIGURATION

CONSTRUCTION NOTES

- 1) 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 300) 102.11/108.5 - SANITARY SEWER BASIC MANHOLE (48" I.D.). MONITORING EQUIPMENT MANHOLE. INCLUDES 2" SDR-35 PVC CONDUIT CONNECTION TO MONITORING MANHOLE. (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).

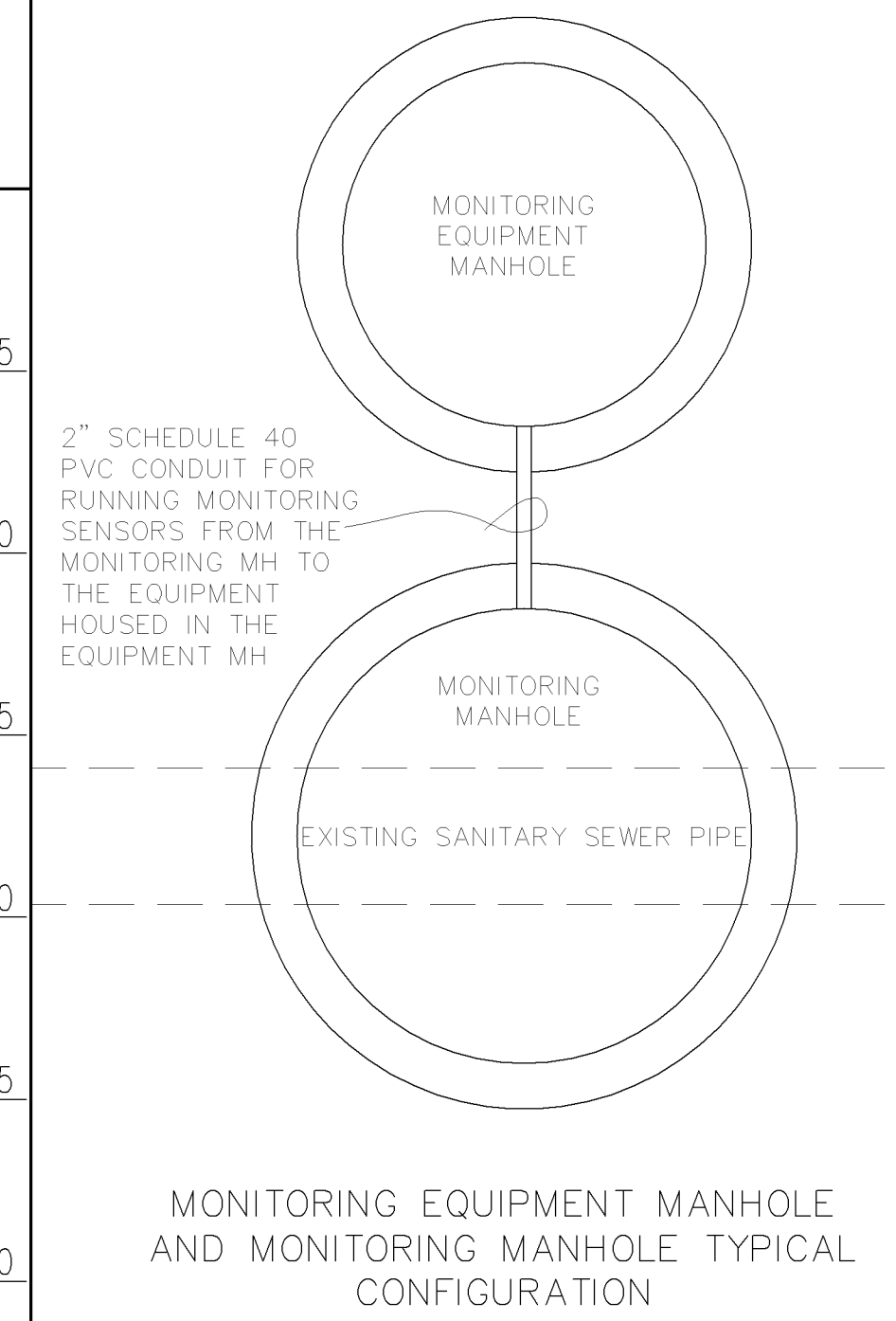
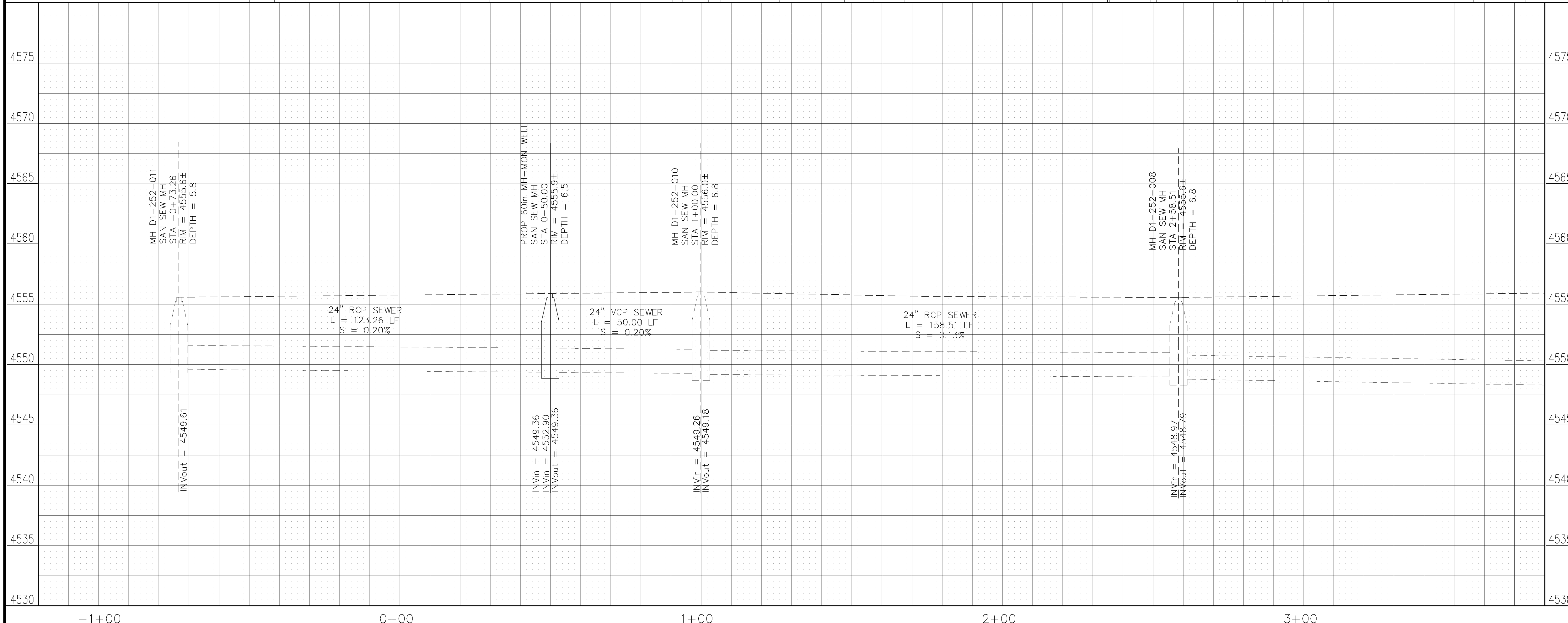
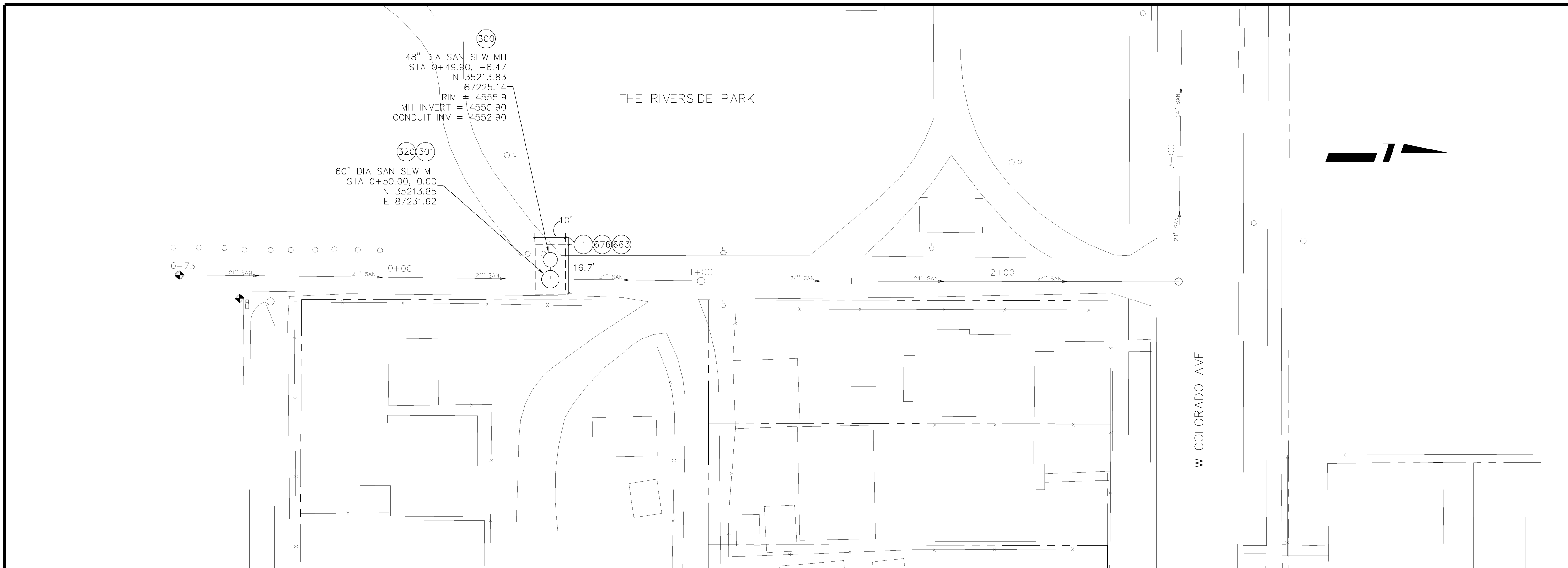
CONSTRUCTION NOTES

- 320) 102.11 - CONNECT MANHOLE TO EXISTING SANITARY SEWER. CONTRACTOR SHALL USE A CAST-IN-PLACE BASE TO FORM INVERT AROUND THE EXISTING PIPE. RING GASKETS OR OTHER WATER STOPS ARE TO BE PLACED AROUND THE INLET AND OUTLET PIPES TO ENSURE A WATER TIGHT SEAL IS PROVIDED AT THE MH BASE. CARE SHOULD BE TAKEN SO THAT THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE. THE TOP OF THE EXISTING PIPE SHALL BE CUT AND REMOVED TO PROVIDE FOR THE NEW INVERT IN. CONTRACTOR SHALL CONTROL SEWER FLOW AND NOT ALLOW DEBRIS TO ENTER THE PIPE.
- 663) AGGREGATE BASE COURSE (CLASS 6) (6" THICK) (BY OTHERS)
- 676) HOT BITUMINOUS PAVEMENT (3" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 1 1/2" LIFTS) (BY OTHERS)



REVISION Δ REVISION Δ REVISION Δ REVISION Δ	DESCRIPTION DATE DRAWN BY JCS DATE 2007 DESIGNED BY DATE CHECKED BY DATE APPROVED BY DATE	SCALES: PLAN HORIZONTAL 0 5 10 20 PROFILE HORIZONTAL 0 5 10 20 VERTICAL 2.5 5		PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION	SANITARY SEWER MONITORING MH ADDITIONS 25' NORTH OF THE CITY SHOPS GAS PUMPS
--	--	--	--	---	---

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
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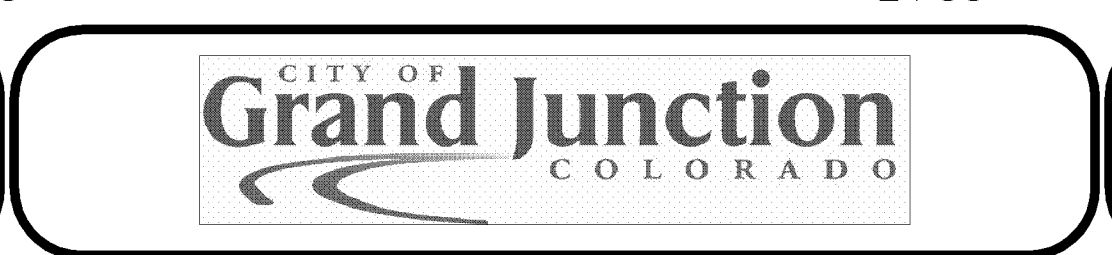
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REVISION B				
REVISION C				
REVISION D				

SCALES:

PLAN
0 5 10 20

PROFILE
HORIZONTAL
0 5 10 20
VERTICAL
2.5 5



PUBLIC WORKS
AND UTILITIES
ENGINEERING DIVISION

SANITARY SEWER MONITORING MH ADDITIONS
60' SOUTH OF THE NORTH EAST CORNER OF
THE RIVERSIDE PARK