



THIRD STREET WEST

WEST AVENUE

FOURTH STREET WEST



EXISTING CONDITIONS AERIAL  
AERIAL NOT TO SCALE

INDEX TO PLAN SHEETS

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THIS PLAN CONTAINS 17 TOTAL SHEETS

SITE ADDRESS

300 WEST AVENUE  
ZUMBROTA, MN 55992

SITE LEGAL DESCRIPTION  
BLOCK 4, ORIGINAL PLAT OF ZUMBROTA,  
GOODHUE COUNTY, MINNESOTA.

ZONING

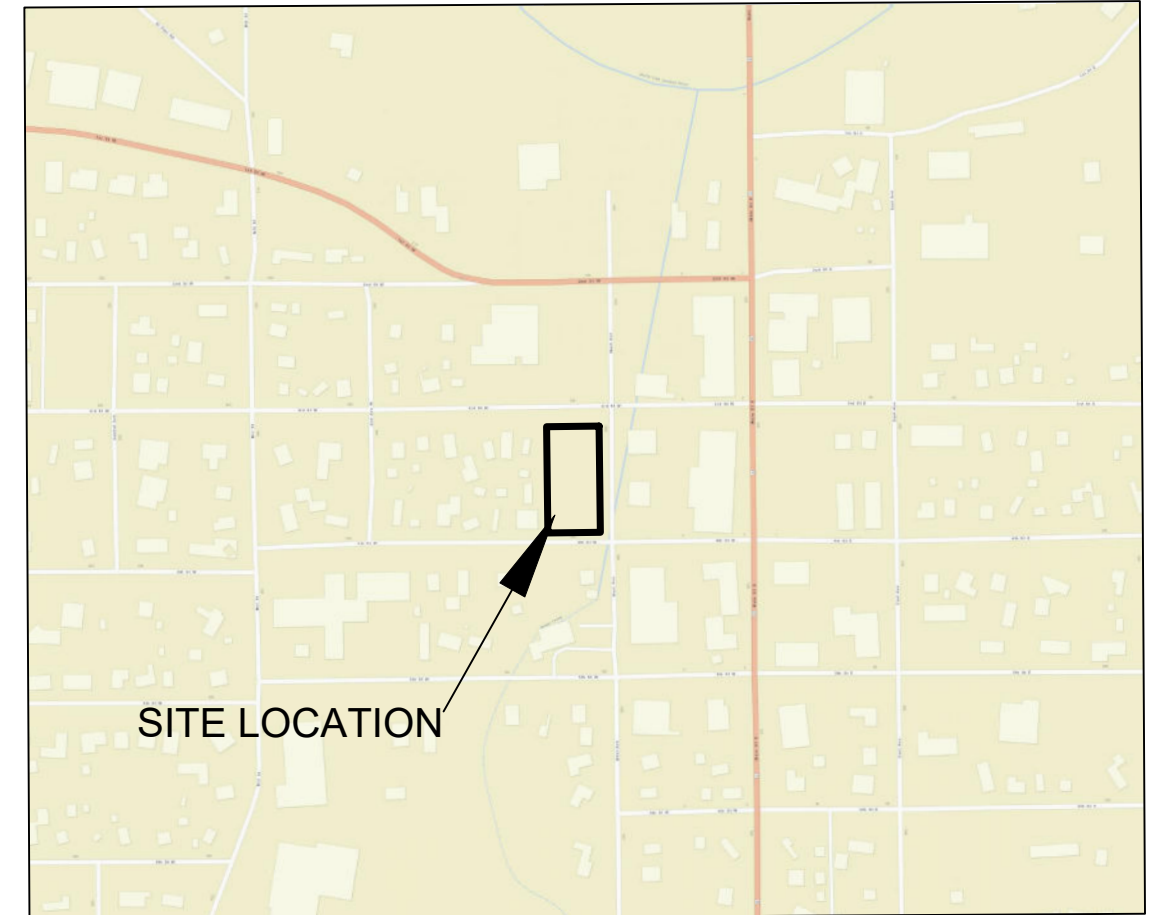
CURRENTLY ZONED: PUD

BENCHMARK

TOP NUT HYDRANT AT THE NORTHWEST QUADRANT  
OF WEST AVENUE, AND WEST FOURTH STREET  
ELEVATION = 983.38

UTILITY CONTACTS

CITY OF ZUMBROTA PUBLIC WORKS.....	507-732-7318
ZUMBROTA TELEPHONE COMPANY.....	507-732-5103
MINNESOTA ENERGY.....	800-889-9508
EXCEL ENERGY.....	507-732-5815
GOODHUE COUNTY CO-OP ELECTRICITY.....	507-732-5117
CHARTER.....	507-289-1611
FRONTIER.....	866-497-3059



SITE LOCATION



VICINITY MAP  
VICINITY MAP NOT TO SCALE

NOTES

- 1.) NO CONSTRUCTION MAY BEGIN UNTIL EROSION AND SEDIMENT CONTROLS ARE IN PLACE AND APPROVED BY THE CITY OF ZUMBROTA.
- 2.) NO CONSTRUCTION MAY BEGIN UNTIL A PRECONSTRUCTION MEETING IS HELD WITH THE CITY OF ZUMBROTA.
- 3.) PREVAILING SPECIFICATIONS: CITY OF ZUMBROTA, MNDOT SPECIFICATIONS, CEAM SPECIFICATIONS.
- 4.) NO CHANGES SHALL BE MADE TO APPROVED PLANS WITHOUT WRITTEN CONSENT OF THE CITY OF ZUMBROTA.
- 5.) ONLY CITY OF ZUMBROTA EMPLOYEES ARE PERMITTED TO OPERATE VALVES AND HYDRANTS.
- 6.) ELEVATIONS FOR CONNECTING TO EXISTING STUBS FOR SANITARY SEWER, WATER, AND STORM SEWER WILL NEED TO BE FIELD VERIFIED.
- 7.) EXISTING "AS-BUILT" INFO IS FROM TOPOGRAPHIC SURVEY.

CALL BEFORE YOU DIG  
GOPHER STATE  
ONE CALL

TWIN CITY AREA 651-454-0002  
MIL TOLL FREE 1-800-252-1166

PATH: S/SHARE/PLATS/CITY OF ZUMBROTA/BLOCK 4/CIVIL/CAD

**J** Engineering, Surveying  
& Planning  
**JOHNSON & SCOFIELD INC.**  
1203 Main Street Red Wing, MN 55086  
ph. 651.388.1558 fax 651.388.1559

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*Steven P. Voigt*  
Steven P. Voigt, PE  
DATE 3-2-2021 REG. NO. 20034

DESIGNED SPD\SPV  
DRAWN SPD  
CHECKED SPV

REVISED	BY	DATE














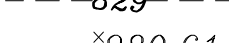
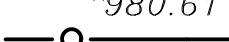



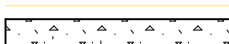
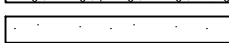


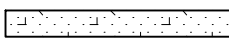










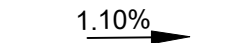

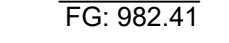
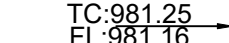
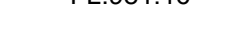

LATEST REVISION:  
Prepared For:  
**ANDY BAARTMAN**  
A-1 CLEANING  
P.O.B. 31  
RED WING, MN 55066  
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ZUMBROTA APARTMENTS

TITLE SHEET

ZUMBROTA, MN

SHEET 1 OF 17 SHEETS

	BOUNDARY LINE
	EXISTING CURB AND GUTTER
	EXISTING OVERHEAD POWER LINE
	EXISTING POWER POLE
	EXISTING STORM SEWER LINE
	EXISTING STORM SEWER CATCH BASIN
	EXISTING STORM SEWER MANHOLE
	EXISTING WATER MAIN
	EXISTING WATER MAIN GATE VALVE
	EXISTING FIRE HYDRANT TO BE RELOCATED
	EXISTING SANITARY SEWER LINE
	EXISTING SANITARY SEWER MANHOLE
	EXISTING TELEPHONE PEDESTAL TO BE RELOCATED
	EXISTING CONTOUR AND ELEVATION
	EXISTING SPOT ELEVATION
	PROPOSED BIO LOGS
	PROPOSED INLET PROTECTION
	PROPOSED SAW CUT
	PROPOSED CURB AND GUTTER TO BE REMOVED
	EXISTING CONCRETE
	EXISTING BITUMINOUS
	EXISTING CONCRETE TO BE REMOVED
	EXISTING BITUMINOUS TO BE REMOVED
	PROPOSED CONCRETE
	PROPOSED BITUMINOUS
	PROPOSED WATER MAIN
	PROPOSED FIRE HYDRANT
	PROPOSED TELEPHONE PEDESTAL
	PROPOSED STORM SEWER
	PROPOSED STORM SEWER MANHOLE
	PROPOSED ROOF RAIN CONNECTION
	PROPOSED STORM SEWER CLEANOUT
	PROPOSED SANITARY SEWER
	PROPOSED SANITARY SEWER FLOOR DRAIN
	PROPOSED STORM SEWER FLOOR DRAIN
	PROPOSED GROUND SLOPE
	PROPOSED SPOT ELEVATION
	PROPOSED TOP OF CURB ELEVATION
	PROPOSED FLOWLINE OF CURB ELEVATION

DESIGNED	REVIS	BY	DATE
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SPD			
SPV			

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# EROSION CONTROL NOTES

CONTRACTOR SHALL INSTALL PERIMETER BIO-LOGS BEFORE START OF ANY CONSTRUCTION ACTIVITY. TO PREVENT SEDIMENT RUNOFF FROM REACHING THE CURB OR STREET RIGHT OF WAY, PERIMETER DOWNSLOPE BIO-LOGS SHALL BE INSTALLED. BIO-LOGS MUST BE DOUBLE ROWED. JOINTS IN THE SECOND ROW OF BIO-LOGS MUST BE STAGGERED FROM JOINTS IN THE FIRST ROW OF BIO-LOGS.

TO PREVENT TRACKING OF DIRT ONTO HARD SURFACE STREET RIGHT-OF-WAY, ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED AND MAINTAINED UNTIL VEHICLE ENTRANCES ONTO THE SITE ARE NO LONGER REQUIRED AND TOPSOIL IS SCHEDULED TO BE REPLACED. ALL VEHICLE ACCESS TO THIS SITE SHALL USE THE ROCK CONSTRUCTION ENTRANCES. SHOULD THE ROCK CONSTRUCTION ENTRANCES BECOME INEFFECTIVE DUE TO EXCESSIVE SOIL CONTAMINATION, THEY SHALL BE REMOVED AND REPLACED. SEE DETAIL.

THE CONTRACTOR SHALL SALVAGE SUFFICIENT TOPSOIL TO PROVIDE COVER AFTER GRADING OPERATIONS. ALL SOIL STOCKPILES AND FINISHED GRADED AREAS ARE TO BE SEEDED IMMEDIATELY IN ORDER TO ESTABLISH VEGETATION WITH WHEAT OR RYE GRASS @ 100 LB./ACRE DURING CONSTRUCTION. INSTALL AND MAINTAIN APPROVED INLET PROTECTION AT ALL ACTIVE STORM SEWER INLETS. SEE DETAILS. SEDIMENT RUNOFF SHOULD BE MINIMIZED BY RESPONSIBLE SITE EROSION CONTROL. EROSION CONTROL MEASURES MUST BE INSPECTED BY THE CITY BEFORE ANY GRADING ACTIVITY BEGINS. TO PREVENT SILT AND SEDIMENT FROM ENTERING THE STORM SEWER SYSTEM, A FILTER BAG INSERT, SEDIMENT CONTROL INLET HAT, ROCK LOG RING OR OTHER DEVICE APPROVED BY THE CITY, SHALL BE INSTALLED AT THE INLET. THE CONTRACTOR MAY DECIDE TO REMOVE ALL TOPSOIL FROM THE SITE, AND IMPORT BEFORE TURF ESTABLISHMENT.

ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED AS SOON AS POSSIBLE. AREAS THAT HAVE BEEN DISTURBED OR AT FINISH GRADE, BUT HAVE NO ACTIVE WORK, SHALL BE SEEDED AND MULCHED OR SODDED WITHIN 14 DAYS, EXCEPT ON SLOPES STEEPER THAN 4H:1V. STEEPER SLOPES SHALL BE SEEDED AND COVERED WITH AN EROSION CONTROL BLANKET OR SEEDED AND MULCHED WITH A TACKIFYING AGENT OR SODDED. AS SOON AS POSSIBLE AFTER GRADING OPERATIONS HAVE BEEN COMPLETED, TOPSOIL SHALL BE SPREAD AND THE ENTIRE SITE SHALL BE VEGETATED. FINAL SITE STABILIZATION SHALL BE EVIDENT WHEN SEEDED GRASS IS PRESENT ON ALL EXPOSED GRADING AREAS AND HAS GROWN TO A LENGTH OF 6 INCHES AND THERE ARE NO SIGNS OF ONGOING EROSION. IF SOD IS PLACED IN-LIEU OF SEED, IT SHALL BE WATERED AND MAINTAINED AND SHOW NO SIGNS OF STRESS FOR AT LEAST 30 DAYS. THE CITY SHALL APPROVE FINAL SITE STABILIZATION.

A NPDES STORM WATER PERMIT FOR CONSTRUCTION IS NOT REQUIRED FOR THIS PROJECT.

# DEMOLITION NOTES

ALL ASPHALT TO REMAIN SHALL BE SAW CUT AT LIMITS OF REMOVAL.

REMOVE ALL DEMOLITION AND SALVAGED MATERIALS FROM SITE WITHIN 24 HOURS.

LOCATE AND PROTECT ALL UTILITY LINES PRIOR TO AND DURING DEMOLITION AND GRADING OPERATIONS. UTILITY LOCATIONS SHOWN ARE BASED ON BEST AVAILABLE INFORMATION AND ARE NOT GUARANTEED. THE CITY MAY REQUIRE A DISCONNECT PERMIT FOR SEWER AND WATER SERVICES.

CONTACT PRIVATE UTILITY SERVICE FOR ALL OTHER DISCONNECTS.

CONTACT PRIVATE UTILITY SERVICES FOR REROUTES.

# SITE PLAN NOTES

ALL RADII AND PAVEMENT LENGTHS ARE TO THE EDGE OF BITUMINOUS AND CONCRETE OR TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

DRIVEWAYS AND APRONS SHALL BE 8" CONCRETE.


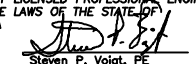
SEE DETAILS FOR CONCRETE AND BITUMINOUS SECTIONS.

SEE ARCHITECTURAL DRAWINGS FOR BUILDING DIMENSIONS.

ALL PARKING SPACES SHALL BE 9' WIDE AND 20' DEEP.

A GOPHER STATE ONE CALL WAS NOT MADE FOR THE DESIGN SURVEY. SURFACE EVIDENCE OF UTILITIES SUCH AS PEDESTALS, VALVES OR MANHOLES WERE LOCATED.

THE CONTRACTOR MUST COORDINATE WITH GOPHER STATE ONE TO LOCATE ALL UTILITIES.

 <b>Engineering, Surveying &amp; Planning</b> <b>JOHNSON &amp; SCOFIELD INC.</b> <small>1203 Main Street Red Wing, MN 55086 ph. 651.388.1558 fax 651.388.1559</small>	<small>I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA</small>  <small>Steven P. Voigt, PE DATE 3-2-2021 REG. NO. 20034</small>	DESIGNED	SPD\SPV	REVISD	BY	DATE	LATEST REVISION:	<b>ZUMBROTA APARTMENTS</b>	<b>TITLE SHEET</b>	
		DRAWN	SPD				Prepared For:			<b>ZUMBROTA, MN</b>
		CHECKED	SPV				<b>ANDY BAARTMAN</b> <b>A-1 CLEANING</b> <b>P.O.B. 31</b> <b>RED WING, MN 55066</b> <b>PHONE: 651-301-5103</b>			

# GRADING NOTES

AS SOON AS POSSIBLE AFTER GRADING OPERATIONS HAVE BEEN COMPLETED, TOPSOIL SHALL BE SPREAD AND THE ENTIRE SITE SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICABLE TO MINIMIZE EROSION. FINAL SITE STABILIZATION SHALL BE EVIDENT WHEN SEEDED GRASS IS PRESENT ON ALL EXPOSED GRADING AREAS AND HAS GROWN TO A LENGTH OF 6 INCHES AND THERE ARE NO SIGNS OF ONGOING EROSION. IF SOD IS PLACED IN-LIEU OF SEED, IT SHALL BE WATERED AND MAINTAINED AND SHOW NO SIGNS OF STRESS FOR AT LEAST 30 DAYS.

# UTILITY NOTES

WATERMAIN SHALL BE DUCTILE IRON CONFORMING TO AWWA C151 . ALL FITTINGS SHALL BE MECHANICAL DUCTILE IRON CONFORMING TO ASME B16.4, AWA C110, AWWA C153. (SEE MINNESOTA PLUMBING CODE CHAPTER 6, TABLE 604.1)

ALL WATER DISTRIBUTION SYSTEM SHALL BE DISINFECTED PER MINNESOTA RULES, PART 4715.2250 AND AWWA STANDARD C651.

A MINIMUM HORIZONTAL SEPARATION OF 10 FEET MUST BE MAINTAINED BETWEEN WATER SERVICE AND ANY SEWER WHENEVER POSSIBLE. A MINIMUM VERTICAL SEPARATION OF 18 INCHES MUST BE MAINTAINED BETWEEN WATER SERVICE AND ANY SEWER. THE WATER SERVICE SHALL NOT CONTAIN ANY JOINTS OR CONNECTIONS WITHIN 10 FEET OF THE CROSSING.

SEWERS CROSSING WHICH ARE NOT AT LEAST 12 INCHES BELOW A WATER SERVICE MUST BE CONSTRUCTED OF MATERIALS APPROVED FOR USE WITHIN A BUILDING (SEE SECTIONS 609.2, 720.1, AND TABLE 701.1). THE WATER SERVICE SHOULD NOT CONTAIN ANY JOINTS OR CONNECTIONS WITHIN 10 FEET OF THE CROSSING.

A MINIMUM 4" OF EXTRUDED POLYSTYRENE BOARD INSULATION SHALL BE INSTALLED ANYTIME WATER LINE CROSSES SANITARY SEWER, STORM SEWER, OR SUBDRAIN SYSTEM.

PVC SANITARY AND STORM SEWERS MUST MEET ONE OF THE FOLLOWING ASTM STANDARDS: D1785, D2665, D3034, F789, F794, F891, F949, OR F1488 (SEE TABLE 701.1 AND INSTALLATION STANDARD 1). FITTINGS MUST COMPLY WITH ASTM D1866, D2665, OR F794 RESPECTIVELY. JOINTS MUST BE APPROVED MECHANICAL OR PUSH-ON UTILIZING AN ELASTOMERIC SEAL, OR SOLVENT WELDED USING ASTM F656 PURPLE PRIMER AND ASTM D2564 SOLVENT CEMENT. THE INSTALLATION MUST COMPLY WITH ASTM D2321, WHICH REQUIRES OPEN-TRENCH INSTALLATION ON A CONTINUOUS GRANULAR BED. ASTM F679 PVC MAY BE USED FOR STORM SEWERS IF APPROVED BY THE LOCAL BUILDING OFFICIAL PRIOR TO INSTALLATION (SEE SECTION 301.2).

CONCRETE MANHOLES AND SEWER LINES SHALL BE TESTED BY NEGATIVE PRESSURE PER ASTM C1214-13, ASTM C1244-11, OR HYDROSTATICALLY PER "MN RULES 4714", SECTION 1109.2.2 (SEE ALSO SECTION 712.4).

INLET AND OUTLET CONNECTIONS TO SEWER MANHOLES MUST USE FLEXIBLE COMPRESSION JOINTS LOCATED BETWEEN 12 AND 36 INCHES FROM THE MANHOLE (SEE SECTION 719.6). WHERE PERMITTED BY THE ADMINISTRATIVE AUTHORITY AS AN ALTERNATE INSTALLATION METHOD, APPROVED RESILIENT RUBBER JOINTS MAY BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCH BASINS, AND OTHER STRUCTURES (SEE SECTION 301.2).

THE PLUMBING SYSTEM AND THE STORM SYSTEM WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED PER "MN RULES 4714", SECTIONS 609.4, 712.0, AND 1109.0.

ALL PVC INLET AND OUTLET CONNECTIONS TO A CONCRETE STRUCTURE SHALL BE MADE BY THE USE OF A FLEXIBLE COMPRESSION JOINT NOT LESS THAN 12 INCHES AND NOT EXCEEDING 3 FEET FROM THE MANHOLE. NO FLEXIBLE COMPRESSION JOINTS SHALL BE EMBEDDED IN THE MANHOLE BASE.

PROPOSED ELECTRIC INSTALLATION MUST BE COORDINATED WITH EXCEL. EXCEL STANDARDS SHALL BE FOLLOWED.

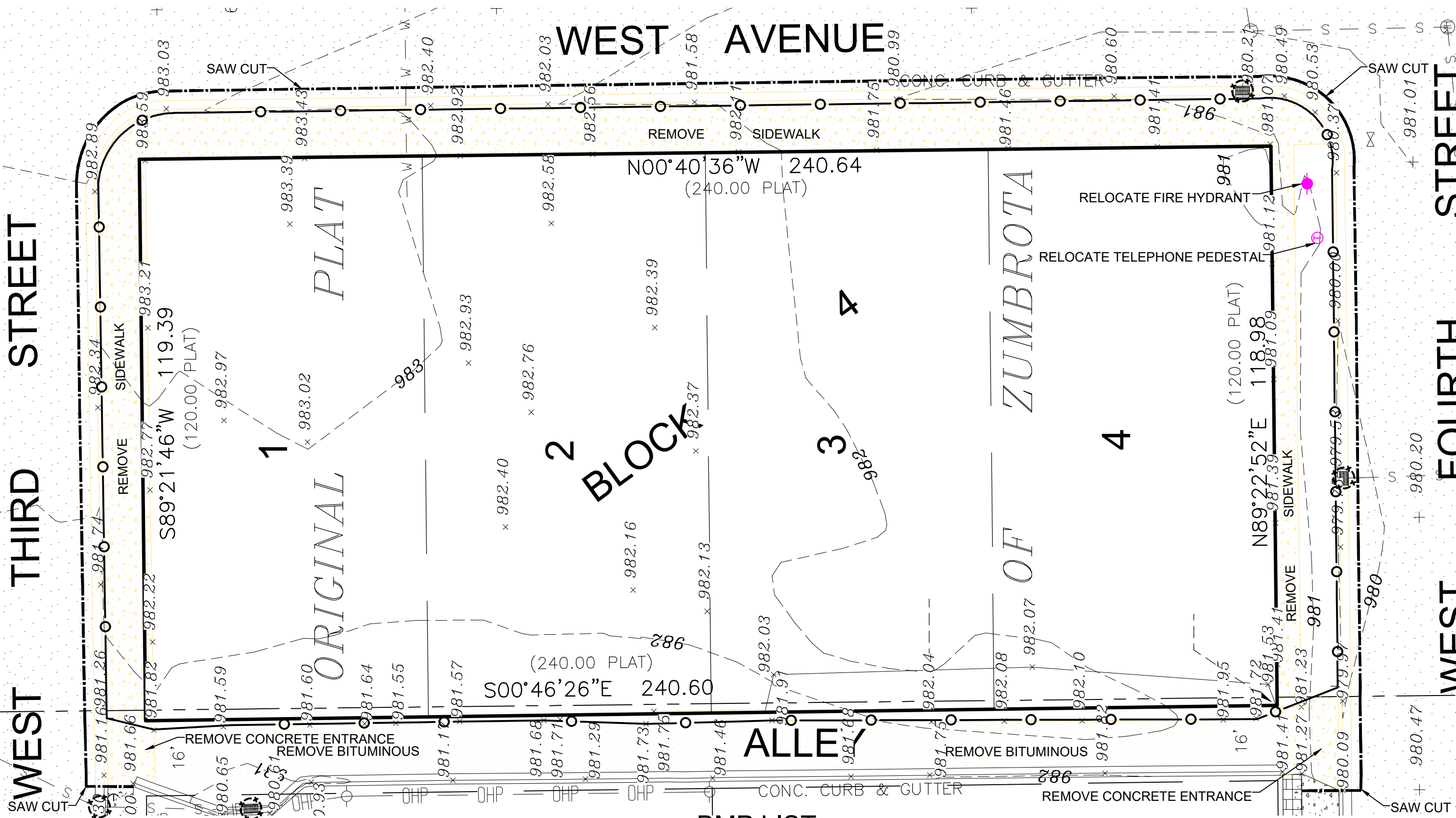
PROPOSED GAS INSTALLATION MUST BE COORDINATED WITH EXCEL. EXCEL STANDARDS SHALL BE FOLLOWED.

ALL CLEANOUTS IN PAVED AREAS SHALL BE PLACED IN A VALVE BOX. TOP OF VALVE BOX SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE.

WEST THIRD STREET

WEST FOURTH STREET

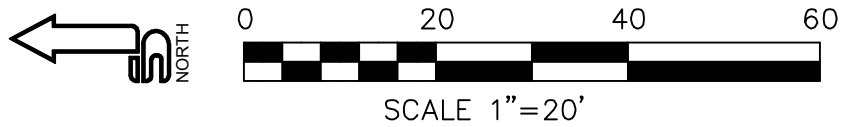
WEST AVENUE



NOTE: PRIOR TO ANY CURB DEMOLITION THE CONTRACTOR SHALL COORDINATE WITH THE SURVEYOR TO ASSURE THAT ENOUGH EXISTING SPOT ELEVATIONS ARE LOCATED TO INSURE THAT THE REPLACEMENT CURB MATCHES THE EXISTING HORIZONTAL AND VERTICLE CURB LOCATIONS.

BMP LIST

ITEM	DESCRIPTION	UNITS	TOTAL ESTIMATED QUANTITY
1	BIO LOGS	LF	770
2	INLET PROTECTION	EA	4



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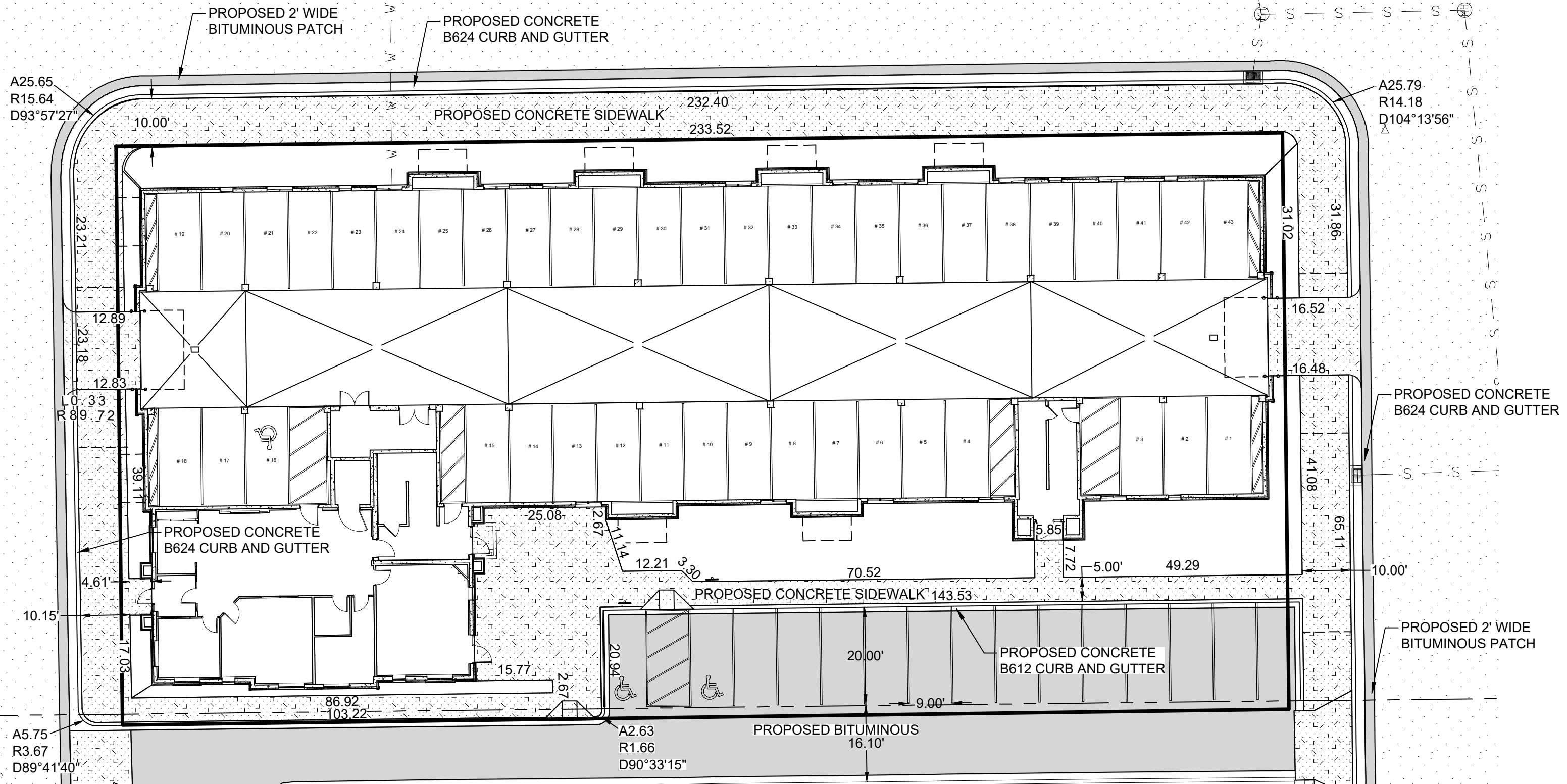
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REVISED	BY	DATE	LATEST REVISION:
			Prepared For:
			ANDY BAARTMAN
			A-1 CLEANING
			P.O.B. 31
			RED WING, MN 55066
			PHONE: 651-301-5103

ZUMBROTA APARTMENTS  
 ZUMBROTA, MN

EXISTING CONDITIONS  
 EROSION CONTROL AND  
 DEMOLITION PLAN

SHEET 5 OF 17 SHEETS



LOT AREA.....	0.66 ACRES (28,678 SF)
EXISTING IMPERVIOUS.....	0 SF (0%)
PROPOSED BUILDING FOOTPRINT.....	17,993 SF
PROPOSED CONCRETE.....	2,627 SF
PROPOSED BITUMINOUS.....	2,975 SF
TOTAL PROPOSED IMPERVIOUS AREA.....	0.54 ACRES, 23,595 SF (82%)
TOTAL PROPOSED GREEN SPACE.....	0.12 ACRES, 5,083 SF (18%)

\*THESE AREAS ONLY INCLUDE SURFACES INSIDE THE PROPERTY BOUNDARY

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 TWIN CITY AREA 651-454-0002  
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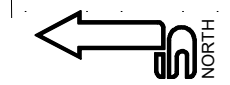
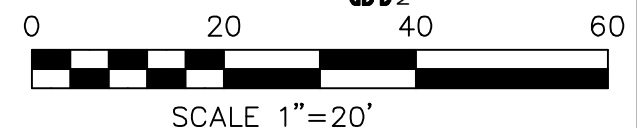
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**ZUMBROTA APARTMENTS**  
**ZUMBROTA, MN**

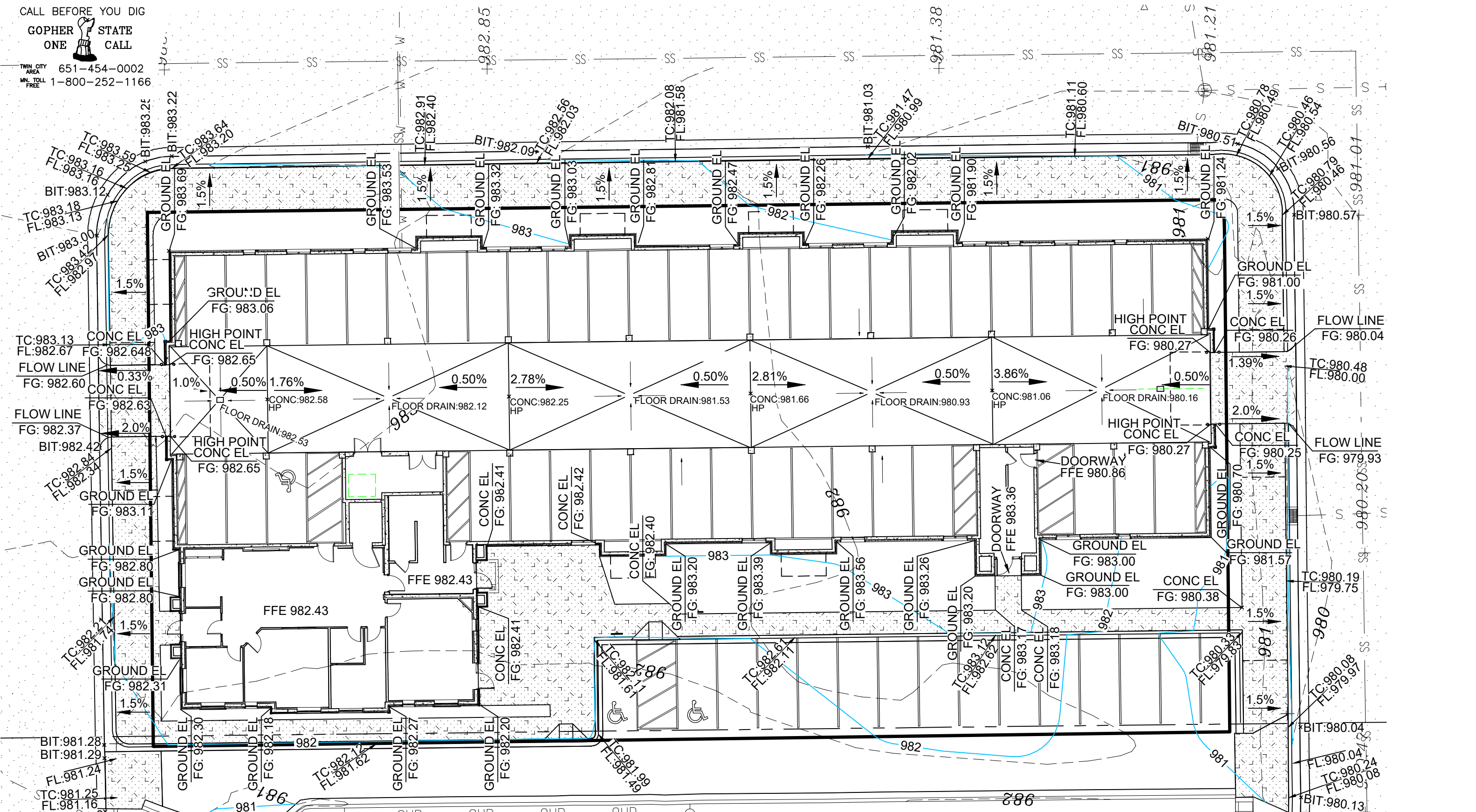
**SITE PLAN**  
**SHEET 6 OF 17 SHEETS**



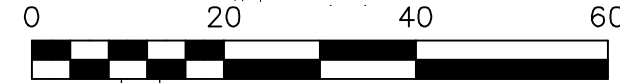
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NOTE: THE PROPOSED CURB ELEVATIONS SHALL MATCH THE EXISTING CURB PRIOR TO DEMOLITION.



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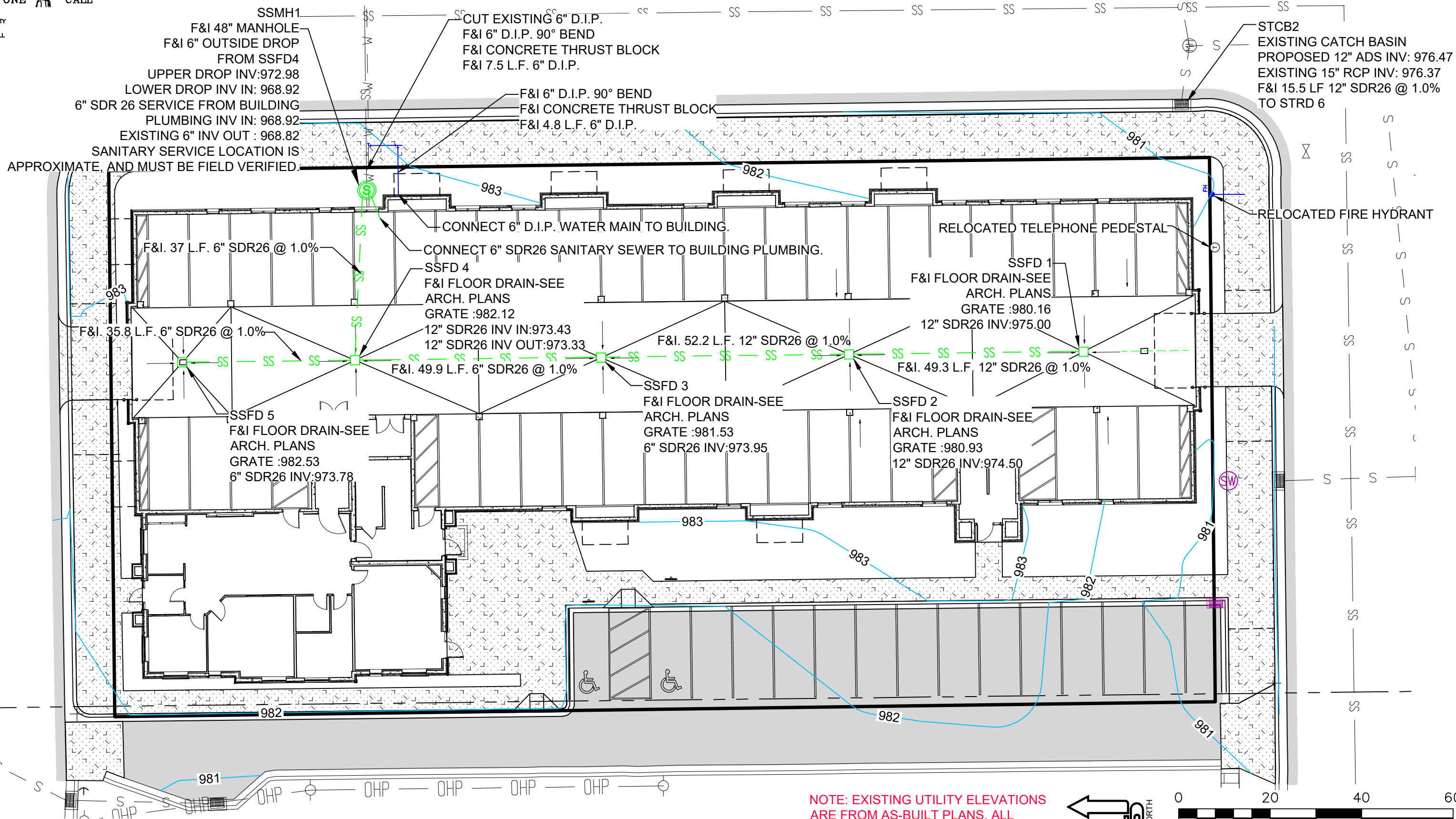
**ZUMBROTA APARTMENTS**  
**ZUMBROTA, MN**

**GRADING PLAN**  
**SHEET 7 OF 17 SHEETS**

CALL BEFORE YOU DIG

GOPHER STATE  
ONE CALL

TWIN CITY  
AREA  
MN. TOLL  
FREE



NOTE: EXISTING UTILITY ELEVATIONS  
ARE FROM AS-BUILT PLANS. ALL  
CONNECTION ELEVATIONS MUST BE  
FIELD VERIFIED.



SCALE 1"=20'

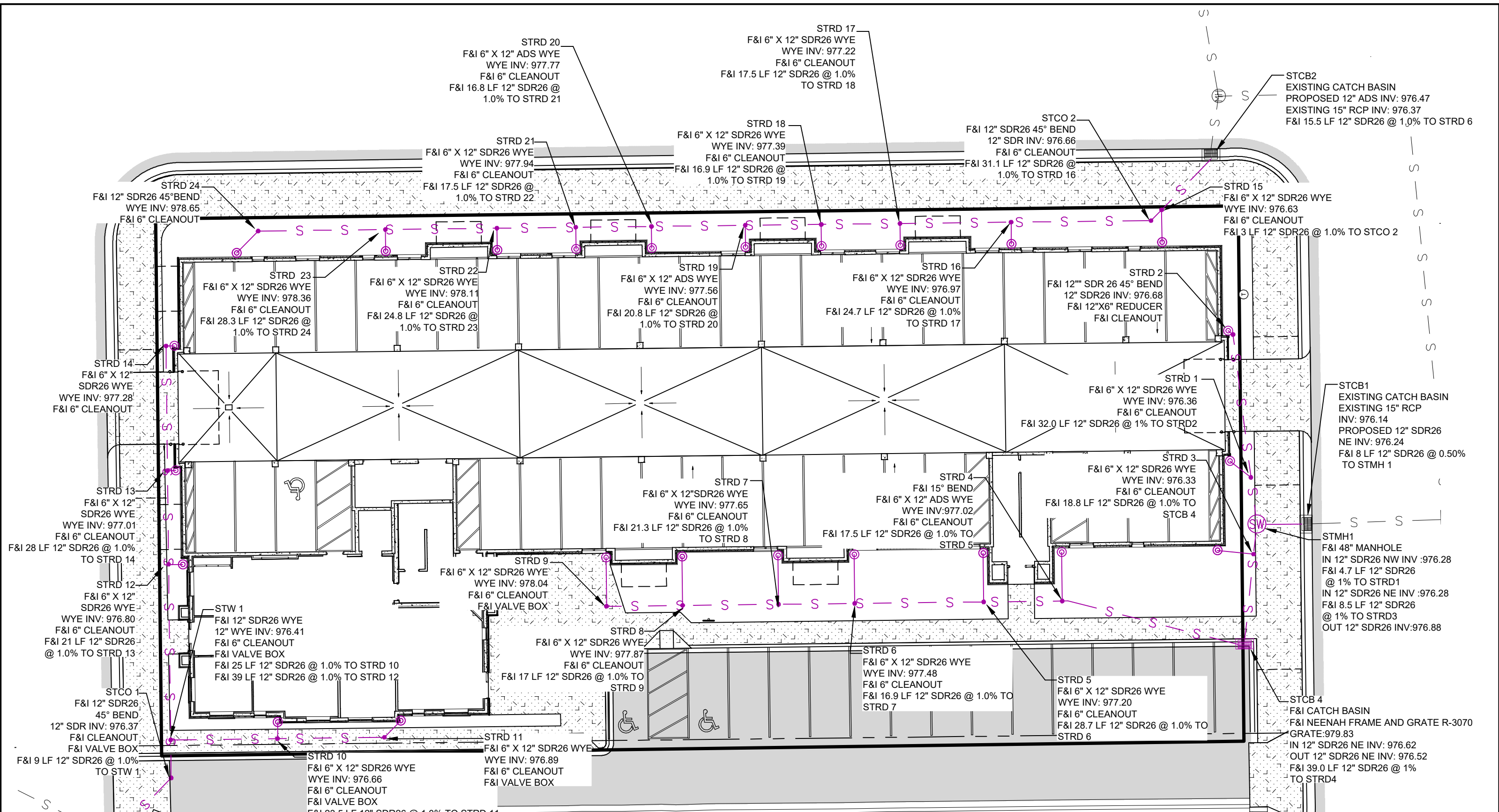
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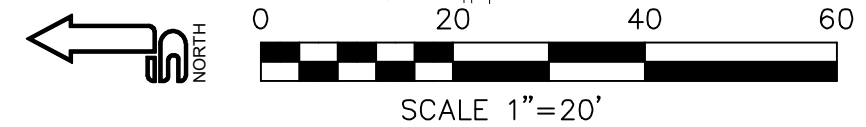
**ZUMBROTA APARTMENTS**  
**ZUMBROTA, MN**

**UTILITY PLAN**  
**SHEET 8 OF 17 SHEETS**



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 GOPHER STATE  
 ONE CALL  
 TWIN CITY AREA 651-454-0002  
 MN. TOLL FREE 1-800-252-1166

NOTE: EXISTING UTILITY ELEVATIONS ARE FROM AS-BUILT PLANS. ALL CONNECTION ELEVATIONS MUST BE FIELD VERIFIED.



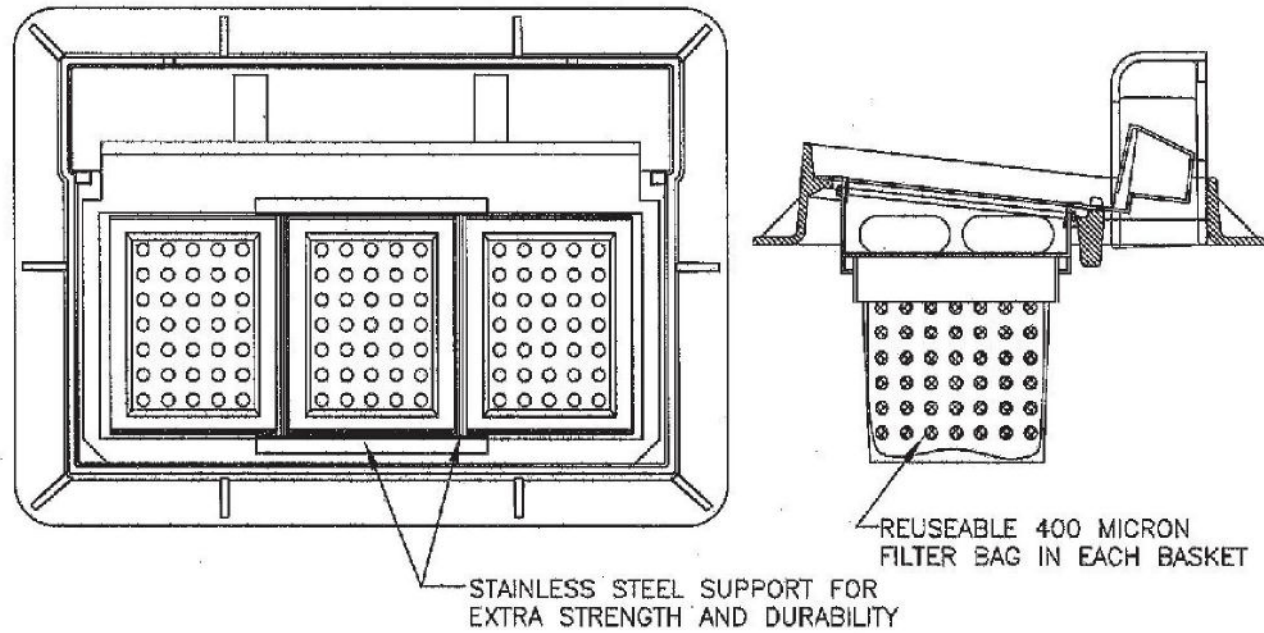
**Engineering, Surveying & Planning**  
**JOHNSON & SCOFIELD INC.**  
 1203 Main Street Red Wing, MN 55066  
 ph. 651.388.1558 fax 651.388.1559

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
 Steven P. Voigt, PE  
 DATE 3-2-2021 REC. NO. 20034

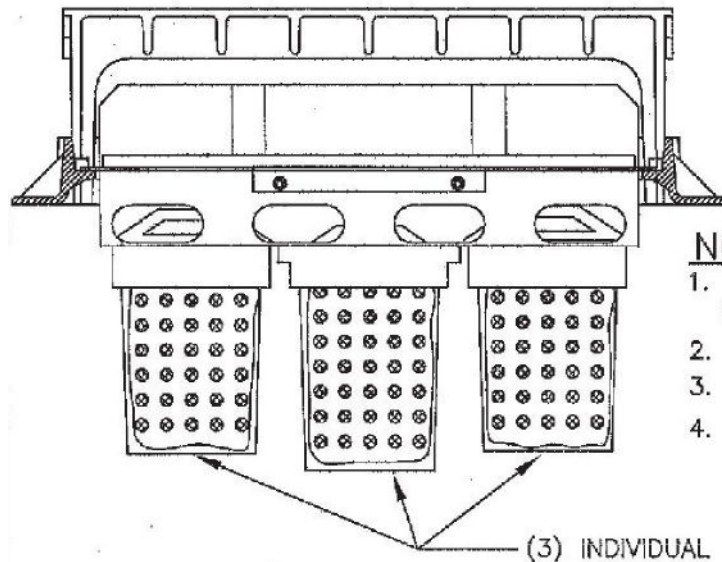
DESIGNED	BY	DATE	LATEST REVISION:
SPD\SPV			Prepared For:
SPD			ANDY BAARTMAN
SPV			A-1 CLEANING
			P.O.B. 31
			RED WING, MN 55066
			PHONE: 651-301-5103

**ZUMBROTA APARTMENTS**  
**ZUMBROTA, MN**

**ROOF DRAIN PLAN**  
**SHEET 9 OF 17 SHEETS**



FILTER AREA	6.5 SQ. FT.
OVERFLOW AREA	0.6 SQ. FT.
MAXIMUM OVERFLOW RATE (@ 7" HEAD)	3.00 CFS
MAXIMUM OVERFLOW RATE (@ 13" HEAD)	4.00 CFS
BASKET WEIGHT (EMPTY)	1 LB
BASKET WEIGHT (FULL-APPROX.)	70 LBS.

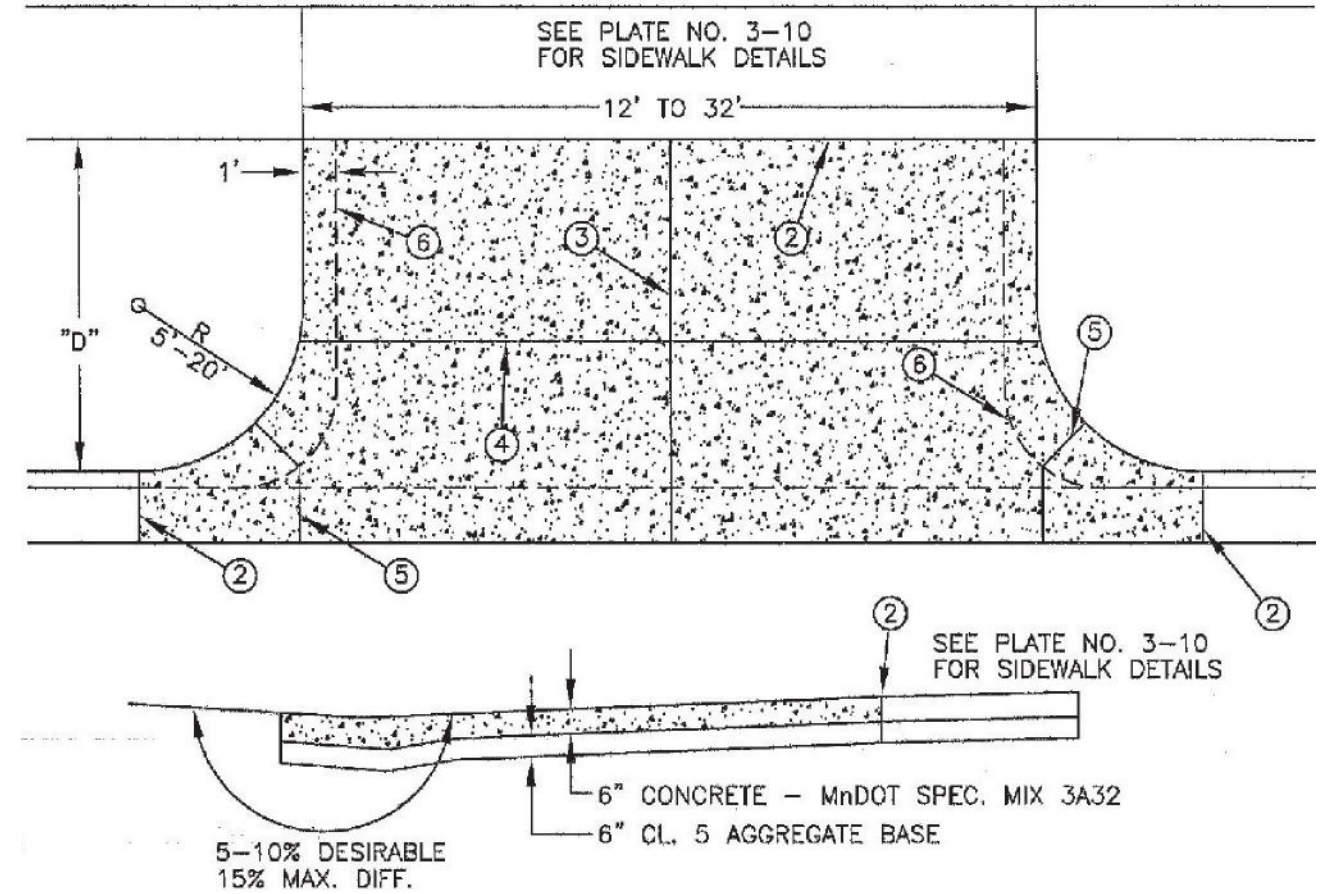


**NOTES:**

1. PRODUCT DESIGN SHALL NOT INTERFERE WITH LOAD BEARING CAPACITY OF FRAMES
2. PRODUCT MATERIAL SHALL BE UV RESISTANT
3. DESIGNED TO FIT NEENAH R-3067
4. FLOW RATES COMPARE TO OR EXCEED FLOW RATES OF COMMONLY USED GRATES

NOT TO SCALE

# INLET PROTECTION

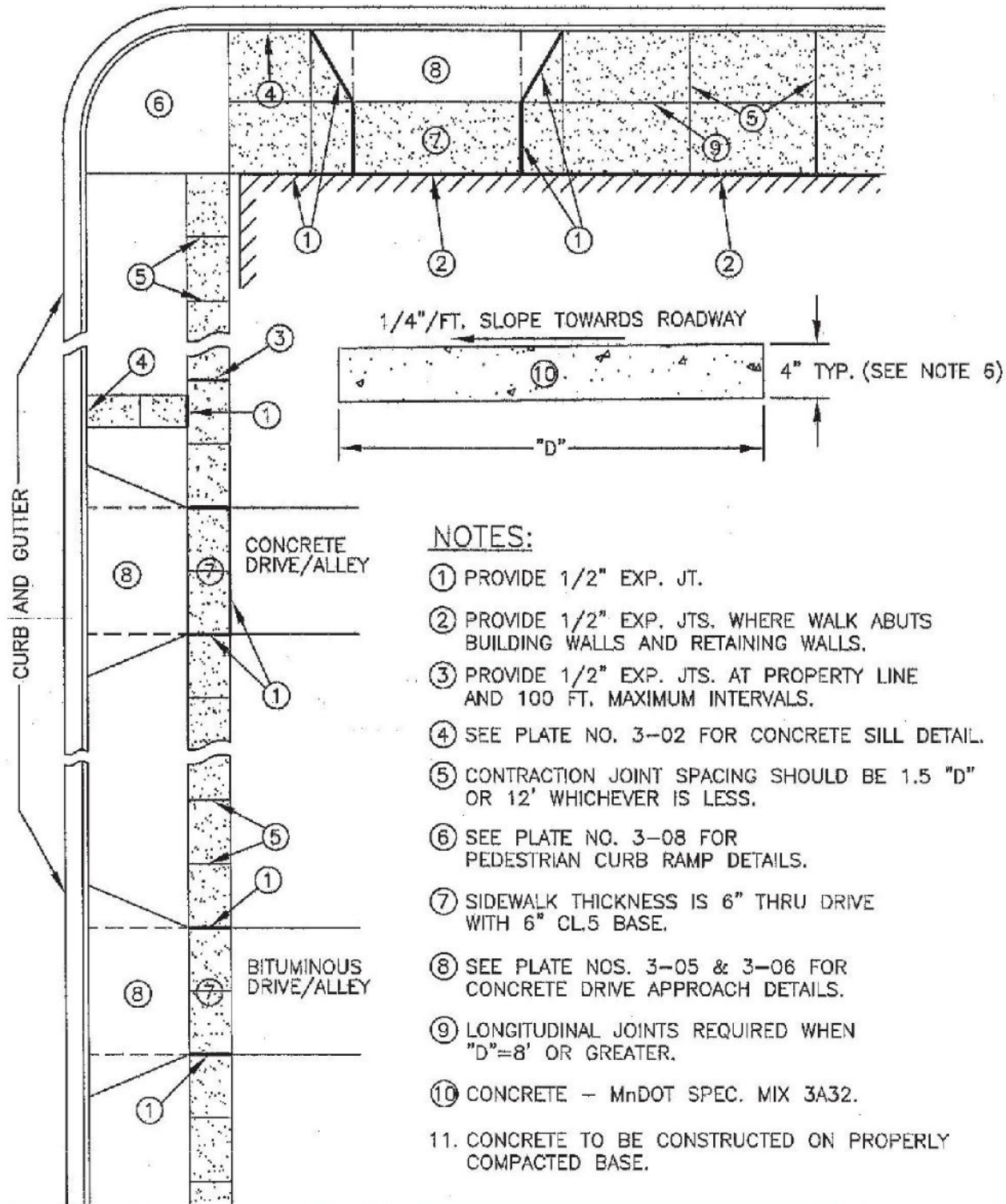


**NOTES:**

1. TYPE B APPROACH ALLOWED ONLY IN COMMERCIAL AND INDUSTRIAL AREAS. VALLEY GUTTERS (PLATE NO. 3-07) ARE ALSO ALLOWED FOR COMMERCIAL AND INDUSTRIAL APPROACHES.
- ② PROVIDE 1/2" EXP. JT. UPON APPROVAL BY THE ENGINEER, SIDEWALK MAY BE POURED MONOLITHICALLY WITH APPROACH AND 1/2" EXP. JT. WOULD NOT BE REQUIRED.
- ③ CONTRACTION JOINTS SPACED SO THAT THE MAX. SPACING BETWEEN THE JOINTS DOES NOT EXCEED 1.5 "D" OR 12' WHICHEVER IS LESS, AS MEASURED ALONG THE BACK OF CURB.
- ④ TRANSVERSE CONTRACTION JOINT REQUIRED WHEN "D"=8' OR GREATER, PLACED AT THE CENTER OF THE APPROACH.
- ⑤ RADIAL CONTRACTION JOINT FROM MIDPOINT OF RADIUS TO STRIKE OFF LINE AND FROM STRIKE OFF LINE TO EDGE OF GUTTER.
- ⑥ STRIKE OFF LINE FOR WASHING OUT CURB AT SIDEWALK CONNECTION. STRIKE OFF LINE RADIUS VARIES DEPENDING ON APPROACH RADIUS. CURB MAY CONTINUE AND MATCH PARKING LOT CURB PROVIDED PEDESTRIAN RAMPS, WITHOUT TRUNCATED DOMES, ARE CONSTRUCTED AT SIDEWALK. (SEE PLATE NO. 3-08)
7. CONCRETE TO BE CONSTRUCTED ON PROPERLY COMPACTED BASE.

NOT TO SCALE

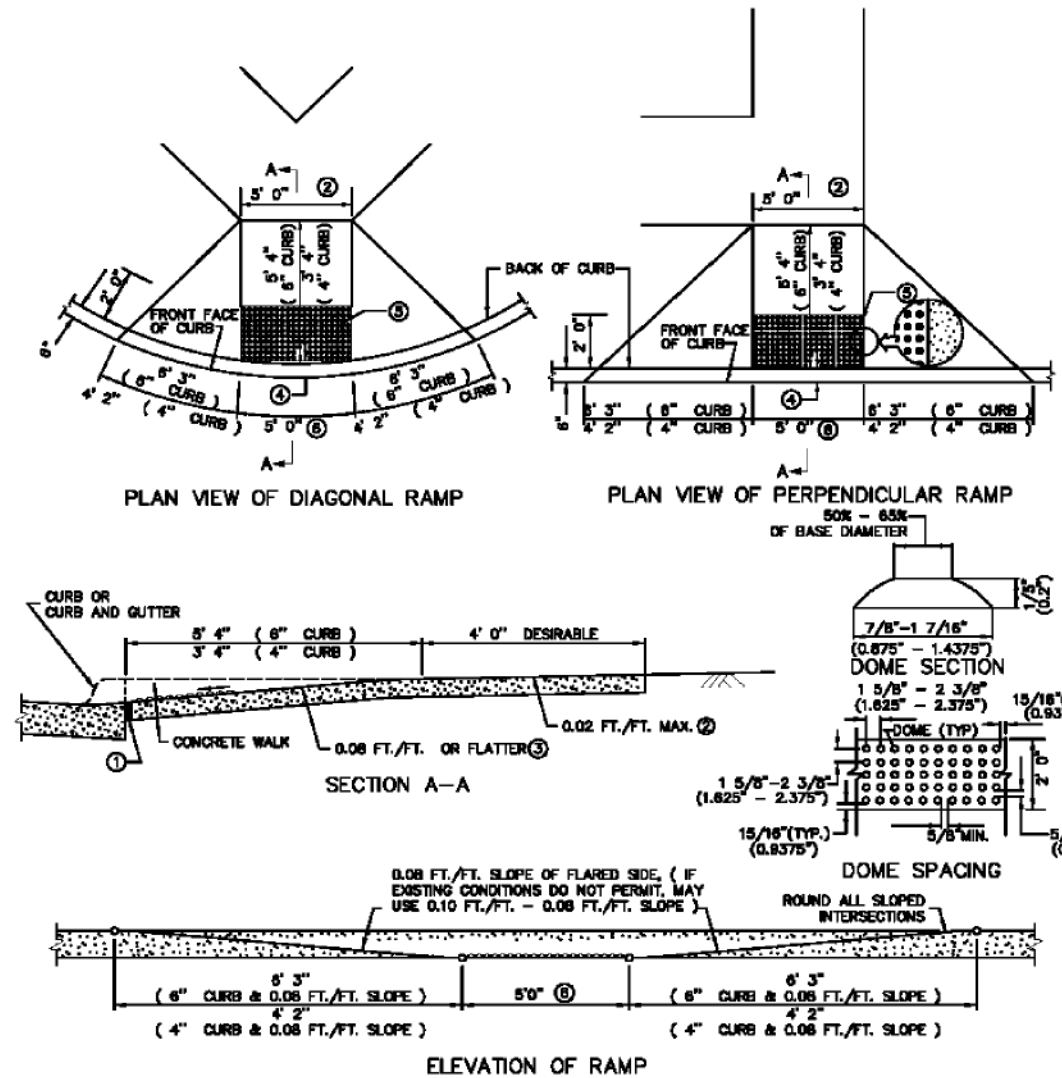
# DRIVE APPROACH



- NOTES:**
- ① PROVIDE 1/2" EXP. JT.
  - ② PROVIDE 1/2" EXP. JTS. WHERE WALK ABUTS BUILDING WALLS AND RETAINING WALLS.
  - ③ PROVIDE 1/2" EXP. JTS. AT PROPERTY LINE AND 100 FT. MAXIMUM INTERVALS.
  - ④ SEE PLATE NO. 3-02 FOR CONCRETE SILL DETAIL.
  - ⑤ CONTRACTION JOINT SPACING SHOULD BE 1.5 "D" OR 12' WHICHEVER IS LESS.
  - ⑥ SEE PLATE NO. 3-08 FOR PEDESTRIAN CURB RAMP DETAILS.
  - ⑦ SIDEWALK THICKNESS IS 6" THRU DRIVE WITH 6" CL.S BASE.
  - ⑧ SEE PLATE NOS. 3-05 & 3-06 FOR CONCRETE DRIVE APPROACH DETAILS.
  - ⑨ LONGITUDINAL JOINTS REQUIRED WHEN "D"=8' OR GREATER.
  - ⑩ CONCRETE - MnDOT SPEC. MIX 3A32.
  - 11. CONCRETE TO BE CONSTRUCTED ON PROPERLY COMPACTED BASE.

NOT TO SCALE

# CONCRETE SIDEWALK



- NOTES:**
- TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA), ALL STATE AND LOCAL AGENCIES ARE REQUIRED TO COMPLY WITH THIS STANDARD. THE CURB AND CURB TRANSITIONS ON THE RAMP WILL BE PAID FOR AS LINEAR FEET OF CONCRETE CURB AND GUTTER. THE ENTIRE RAMP AREA, INCLUDING TRUNCATED DOMES, WILL BE PAID FOR AS CONCRETE WALK. BIKE TRAILS SHALL HAVE TRUNCATED DOMES ACROSS THE ENTIRE WIDTH OF TRAIL WHEN THE TRAIL CROSSES A ROAD. DOMES ARE NOT TO BE USED ON SIDEWALKS OR TRAILS WHEN CROSSING ALLEYS OR DRIVEWAYS.
1. 1/2 INCH PREFORMED JOINT FILLER MATERIAL, AASHTO M 213
  2. WHEN POSSIBLE, PROVIDE A CLEAR PATH OF TRAVEL 4'0" WIDE BEHIND THE PEDESTRIAN RAMP. A RELATIVELY FLAT 5'X5' LANDING WILL ALLOW WHEELCHAIRS TO NAVIGATE AROUND THE PEDESTRIAN RAMP, NO SIGNALS, SIGNS, CABINETS, OR OTHER OBSTRUCTIONS ARE ALLOWED IN THE RAMP OR PATH OF TRAVEL.
  3. WHEN A MEDIAN IS NOT WIDE ENOUGH FOR TWO PEDESTRIAN RAMPS AND A 60" LANDING BETWEEN THEM, THE PEDESTRIAN CROSSING SHALL BE CUT THROUGH THE MEDIAN AT STREET LEVEL.
  4. PLACE THE DETECTABLE WARNINGS (TRUNCATED DOMES) 4" MIN. FROM THE BACK OF CURB AT THE OUTSIDE EDGES. WHEN THE DETECTABLE WARNING SYSTEM IS A PRECAST MATERIAL, THE CURB SHALL BE HAND FORMED TO FILL IN THE GAP.
  5. ADA REQUIRED TRUNCATED DOME AREA SHALL BE 2'0" MIN. IN DIRECTION OF TRAVEL AND SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. THIS TRUNCATED DOME AREA SHALL CONTRAST VISUALLY WITH THE ADJACENT WALKING SURFACE. THE ENTIRE TRUNCATED DOME AREA SHALL BE A LIGHT (GRAY OR BUFF TYPICAL) COLOR WHEN THE ADJACENT SIDEWALK IS A DARK COLOR. THE ENTIRE TRUNCATED DOME AREA SHALL BE A DARK COLOR (DARK GRAY TYPICAL) WHEN THE ADJACENT SIDEWALK IS A LIGHT GRAY CEMENT COLOR.
  6. 5'0" MIN. FOR NEW CONSTRUCTION. 3'0" ALLOWED TO STAY IN PLACE FOR RETROFIT PROJECTS. IN SITUATIONS WHERE THE CURB CUT WIDTH EXCEEDS 4'0". THE DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH.

NOT TO SCALE

# PEDESTRIAN CURB RAMP

**Engineering, Surveying & Planning**  
**JOHNSON & SCOFIELD INC.**  
 1203 Main Street Red Wing, MN 55066  
 ph. 651.388.1558 fax 651.388.1559

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 Steven P. Voigt, PE  
 DATE 3-2-2021 REG. NO. 20034

DESIGNED	REVISD	BY	DATE	LATEST REVISION:
SPD\SPV				Prepared For:
SPD				ANDY BAARTMAN
SPV				A-1 CLEANING
				P.O.B. 31
				RED WING, MN 55066
				PHONE: 651-301-5103

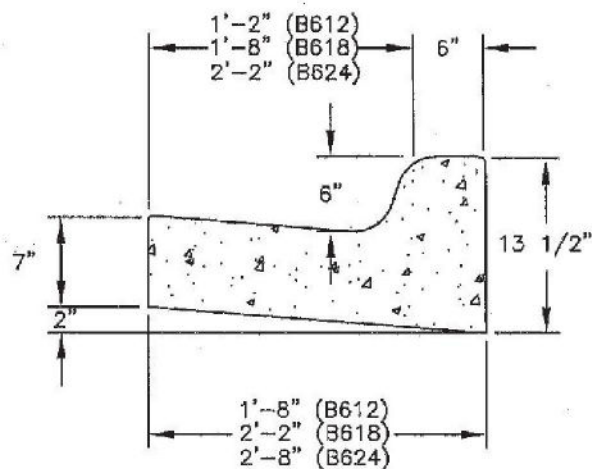
ZUMBROTA APARTMENTS

DETAILS

ZUMBROTA, MN

SHEET 11 OF 17 SHEETS

DESIGN B6

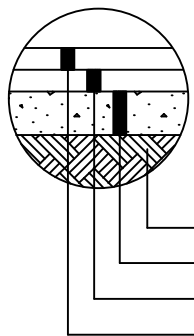


**NOTES:**

1. CONCRETE MIX: MANUAL PLACEMENT—MNDOT SPEC. 3A32, SLIP FORM PLACEMENT—MNDOT SPEC. 3A22.
2. PROVIDE 1/2" EXP. JT. AT 300' MAX. SPACING IN ADDITION TO EXP. JTS. SHOWN ON OTHER DETAIL PLATES.
3. PROVIDE 1/2" EXP. JT. ALONG BACK OF CURB AT LOCATIONS WHERE CURB ABUTS BUILD WALLS AND RETAINING WALLS.
4. PROVIDE CONTRACTION JOINTS AT 10' MAX. SPACING.
5. CONCRETE TO BE CONSTRUCTED ON A PROPERLY COMPACTED BASE.

NOT TO SCALE

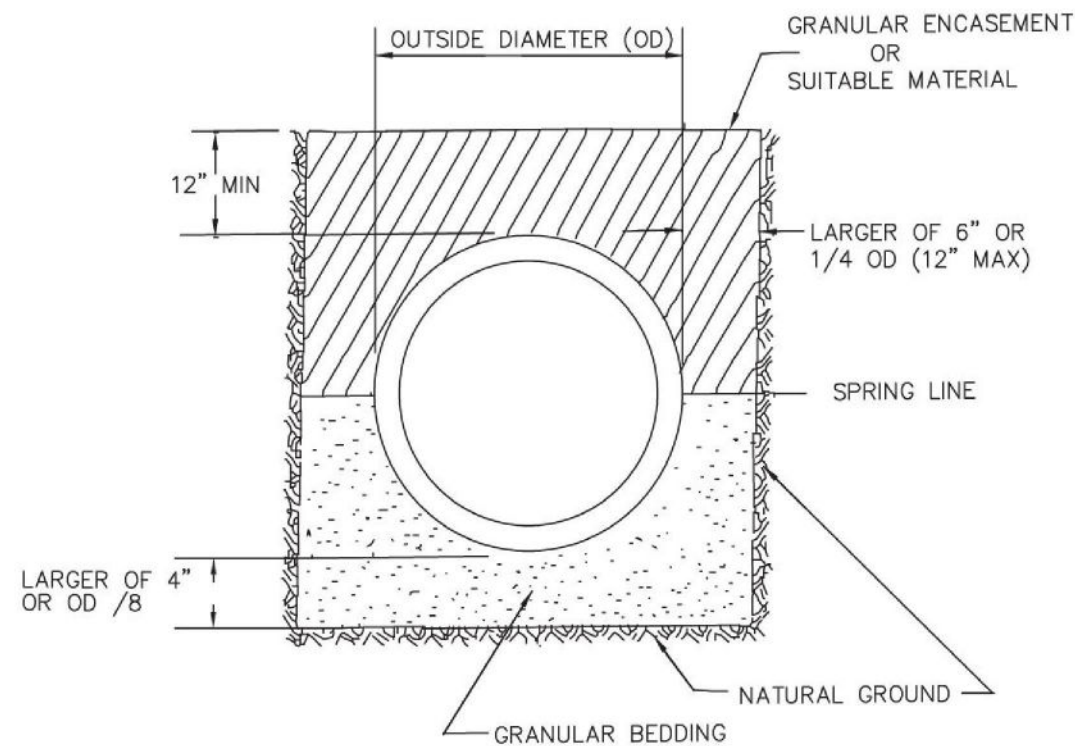
# CURB AND GUTTER



- COMPACTED SUBGRADE
- CONST. 6" CL 5 AGG. BASE
- CONST. 1 1/2" BIT. BASE COURSE — SPNWB330B (MNDOT SPEC. 2360.501)
- CONST. 1 1/2" BIT. WEAR COURSE — SPWEB340B (MNDOT SPEC. 2360.501)

NOT TO SCALE

# BITUMINOUS SECTION



NOT TO SCALE

# PIPE BEDDING

**Engineering, Surveying & Planning**  
**JOHNSON & SCOFIELD INC.**  
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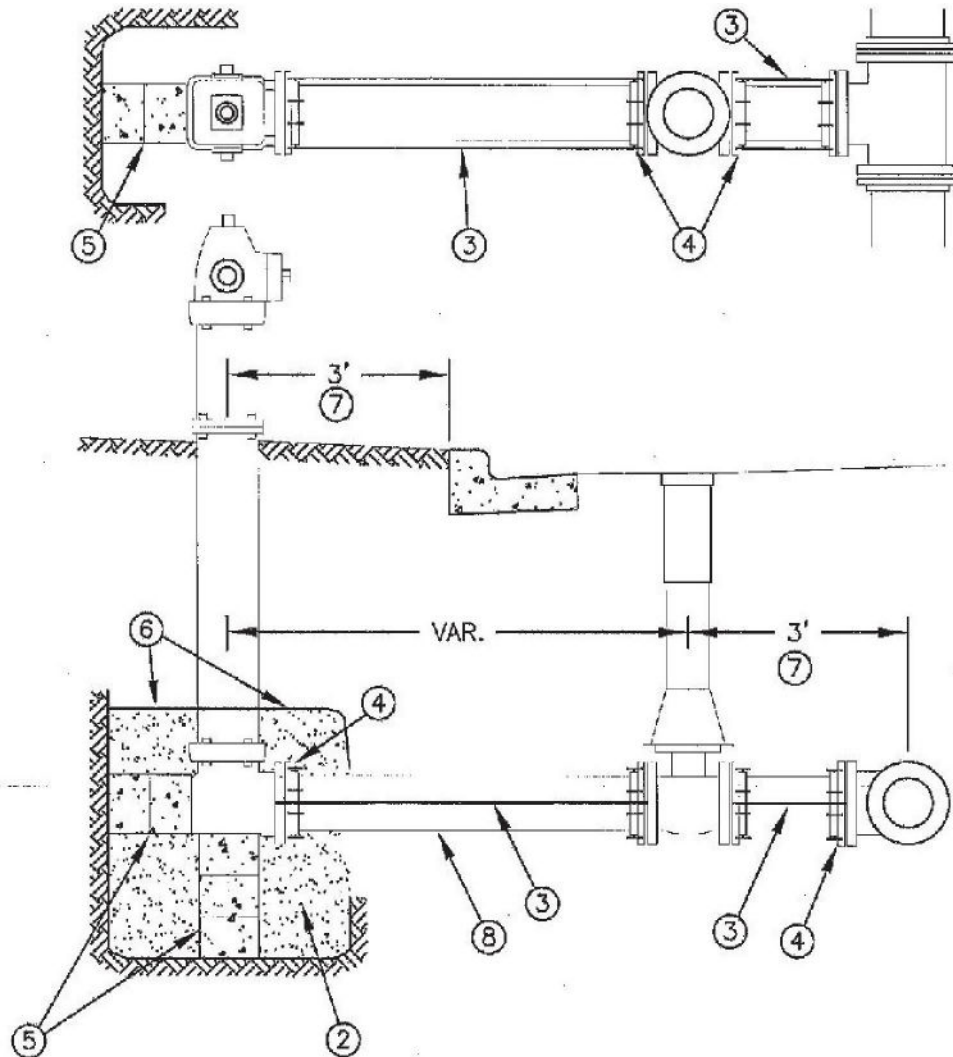
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SPD				ANDY BAARTMAN
SPV				A-1 CLEANING
				P.O.B. 31
				RED WING, MN 55066
				PHONE: 651-301-5103

ZUMBROTA APARTMENTS

DETAILS

ZUMBROTA, MN

SHEET 12 OF 17 SHEETS

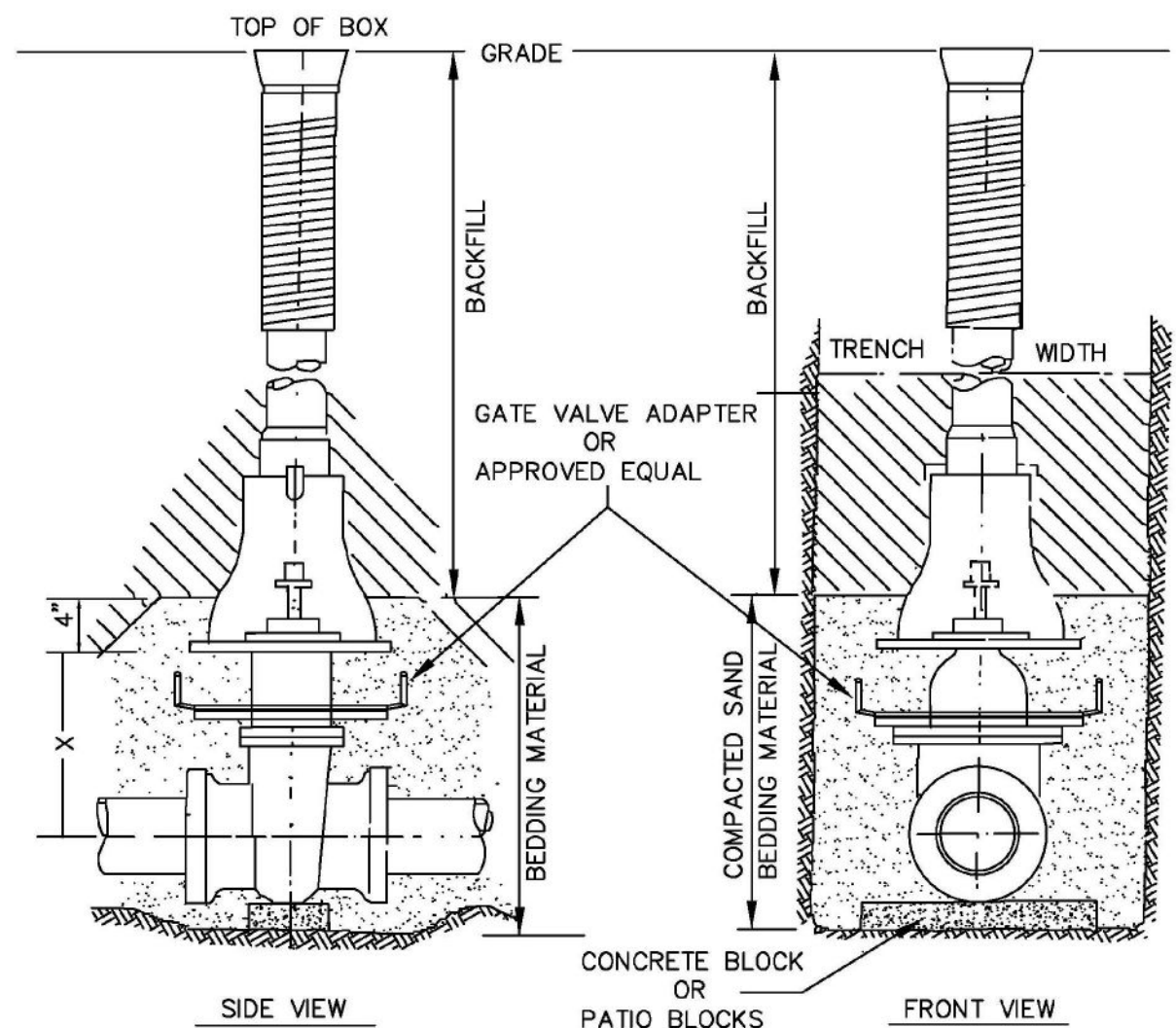


**NOTES:**

- 1 9' BURY HYDRANT
- 2 3/4" TO 1 1/2" WASHED AGGREGATE DRAINAGE PIT (2'X2'X3' DEEP)
- 3 3/4" THREADED RODS, HYDRANT TO VALVE AND VALVE TO MAIN TEE.
- 4 RETAINER GLANDS ON ALL FITTINGS FROM MAIN TEE TO HYDRANT.
- 5 BLOCKING SHALL BE SOLID CONCRETE BLOCKS.
- 6 APPROVED GEOTEXTILE PLACED OVER DRAINAGE PIT.
- 7 3' TYPICAL UNLESS OTHERWISE SPECIFIED ON PLAN.
- 8 RODDING NOT REQUIRED FROM HYDRANT TO VALVE IF OFFSET HYDRANT LEAD IS SPECIFIED.

NOT TO SCALE

# FIRE HYDRANT



PIPE DIA. INCHES	X=SETTING INCHES
2	6
3	7
4	8
6	12
8	13
12	21
16	30

NOT TO SCALE

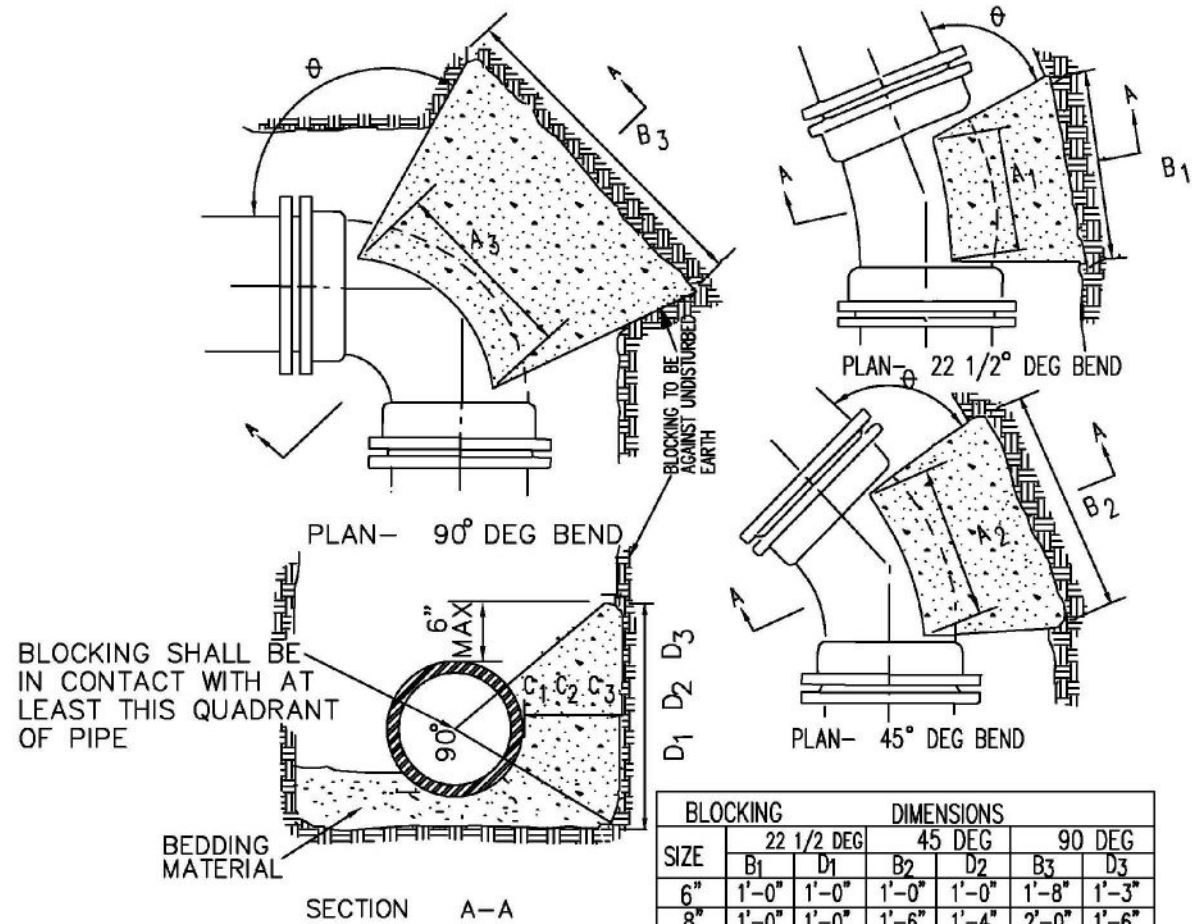
# VALVE BOX

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**JOHNSON & SCOFIELD INC.**  
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ZUMBROTA APARTMENTS	DETAILS
ZUMBROTA, MN	SHEET 13 OF 17 SHEETS

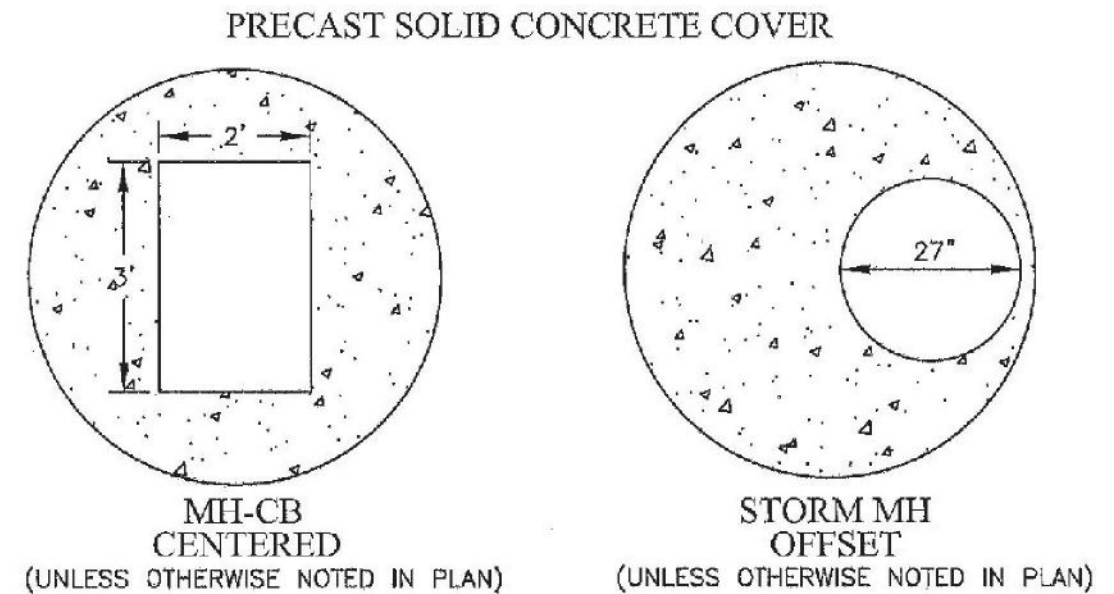


BLOCKING SIZE	DIMENSIONS					
	22 1/2 DEG		45 DEG		90 DEG	
	B1	D1	B2	D2	B3	D3
6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	1'-3"
8"	1'-0"	1'-0"	1'-6"	1'-4"	2'-0"	1'-6"
12"	1'-6"	1'-4"	2'-0"	2'-0"	3'-0"	2'-8"
16"	2'-0"	1'-8"	3'-0"	2'-6"	4'-0"	3'-10"

- NOTES:
- DIMENSIONS IN TABLE ARE BASED ON A WATER PRESSURE OF 150 PSI AND AN EARTH RESISTANCE OF TWO TONS PER SQ. FT.
  - DIMENSION C1, C2, C3, SHOULD BE LARGE ENOUGH TO MAKE ANGLE  $\theta$  EQUAL TO OR LARGER THAN 45 DEG.
  - DIMENSION A1, A2, A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH MECHANICAL JOINT BOLTS.
  - SHAPE OF BACK OF CONCRETE BLOCKING MAY VARY AS LONG AS POUR IS AGAINST FIRM UNDISTURBED EARTH.
  - 5 BAG MIX CONCRETE TO BE USED FOR BLOCKING.
  - FOR LOSSE SANDY SOILS INCREASE ALL DIMENSIONS TO 6 INCHES.
  - PLACE 6MIL POLYETHYLENE FILM AROUND ALL BOLTS, NUTS, AND JOINTS. NOTE: REACTION BACKING USING CONCRETE, WOOD, RETAINER GLANDS, ROD TIES, ETC SHALL BE INCLUDED AS A PART OF INSTALLING THE WATERMAIN. NO SEPARATE COMPENSATION SHALL BE MADE.

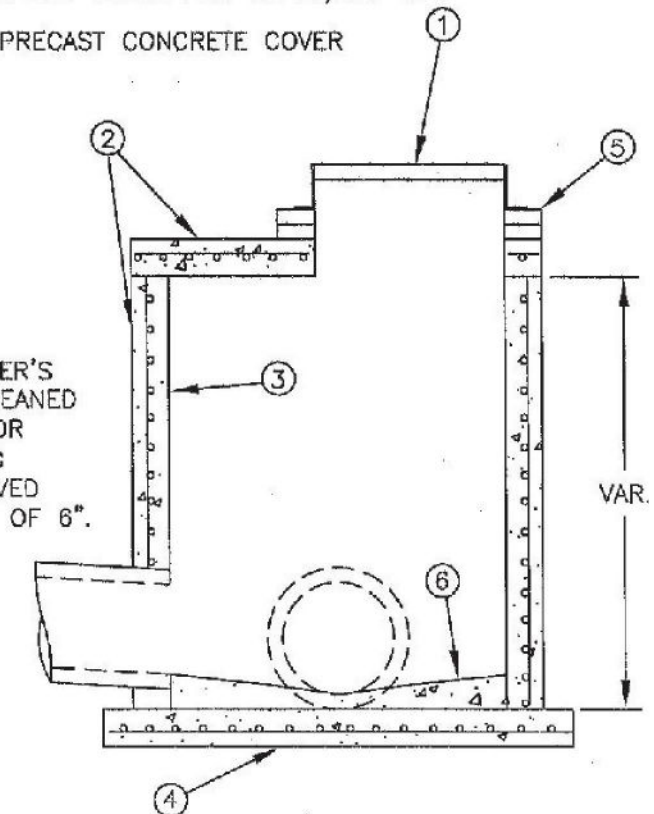
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# THRUST BLOCKS



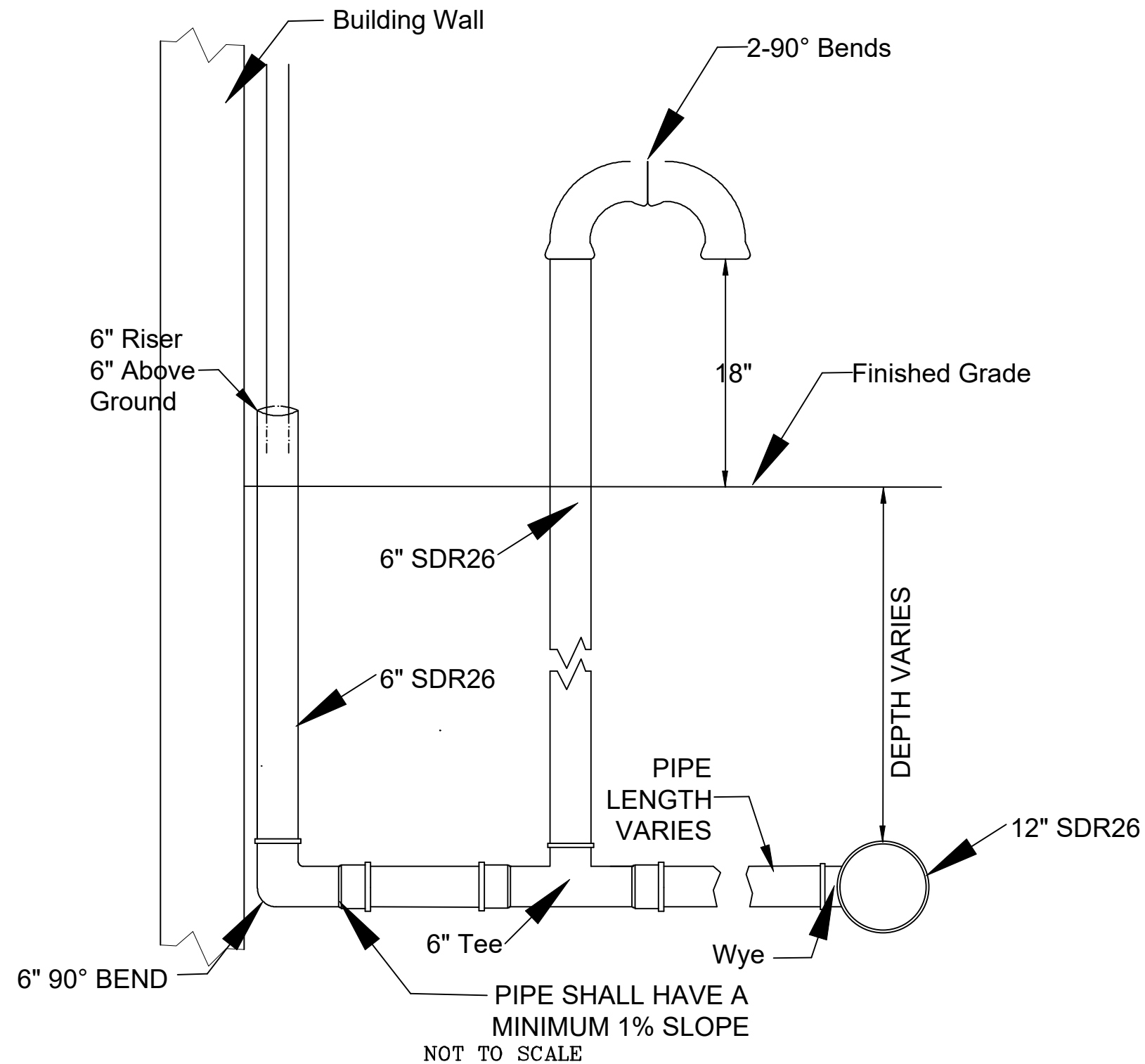
NOTES:

- REFER TO PLANS AND/OR SPECIAL PROVISIONS FOR FRAME AND GRATE/LID TYPE
- SEE MnDOT PLATE NO. 4020 AND 4022 FOR PRECAST CONCRETE COVER AND 4005 FOR MANHOLE BARREL DETAILS
- MANHOLE BARREL MAY BE CONSTRUCTED UTILIZING SOLID CONCRETE MH BLOCK INCORPORATING 3/16" HEAVY DUROWALL REINFORCEMENT EVERY SECOND COURSE
- SEE MnDOT PLATE NO. 4011 FOR PRECAST CONCRETE BASE DETAILS
- HIGH DENSITY POLYETHYLENE ADJUSTING RINGS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION'S STARTING ON A SOLID, CLEANED TOP SECTION OF THE INPLACE STRUCTURE. FOR MANHOLES, THE OUTSIDE OF THE ENTIRE RING SECTION SHALL BE WRAPPED WITH AN APPROVED GEOTEXTILE FABRIC WITH A MINIMUM OVERLAP OF 6". FOR CB & MH-CB ADJUSTMENTS SEE PLATE NO. 1-01
- ALL CONCRETE INVERTS SHALL HAVE A MINIMUM OF 2" CONCRETE DEPTH WITH A MINIMUM SLOPE OF 1/4" PER FOOT TO OUTLET. FLOW LINES SHALL BE FORMED TO APPROXIMATE SHAPE OF THE LOWER 4" OF THE OUTLET PIPE.

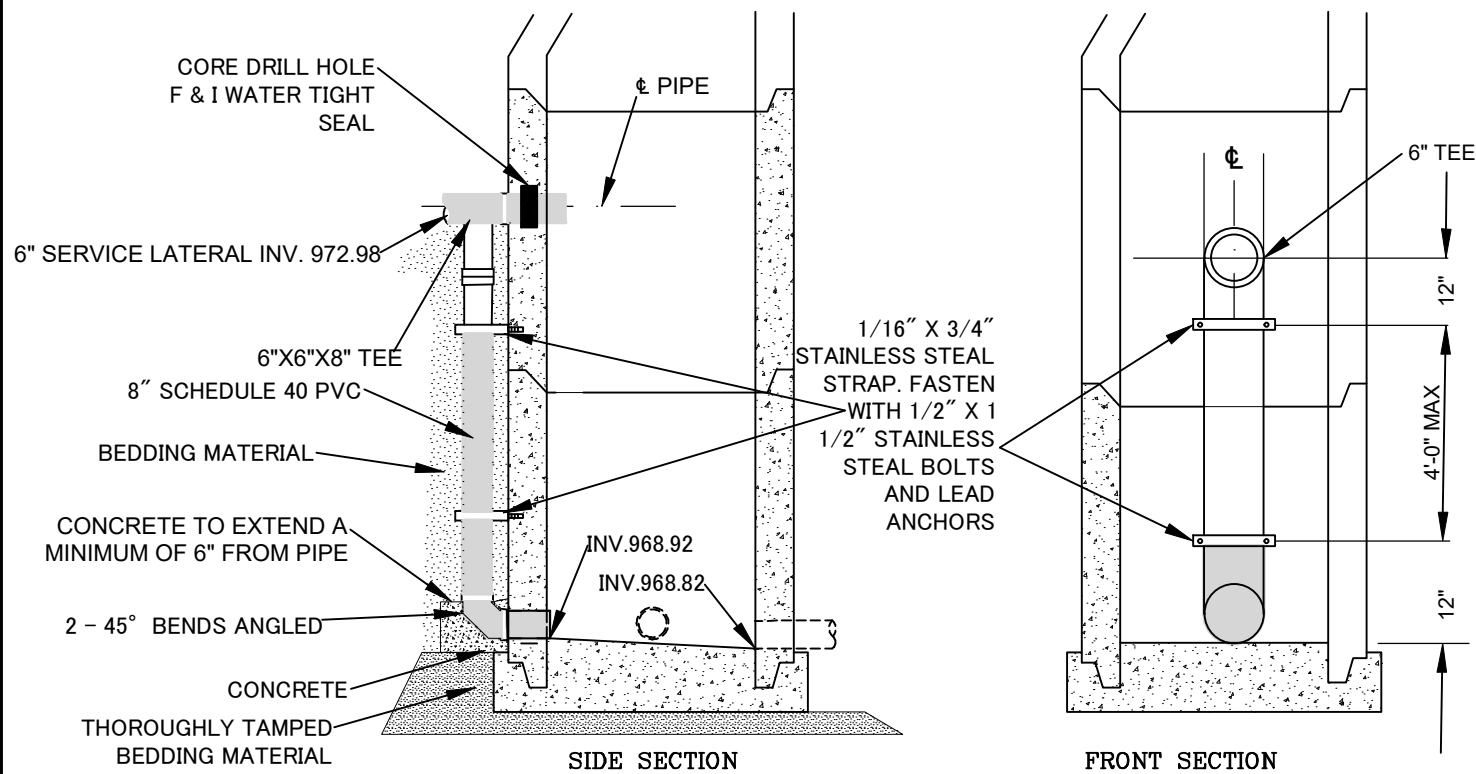


NOT TO SCALE

# STORM SEWER MANHOLE

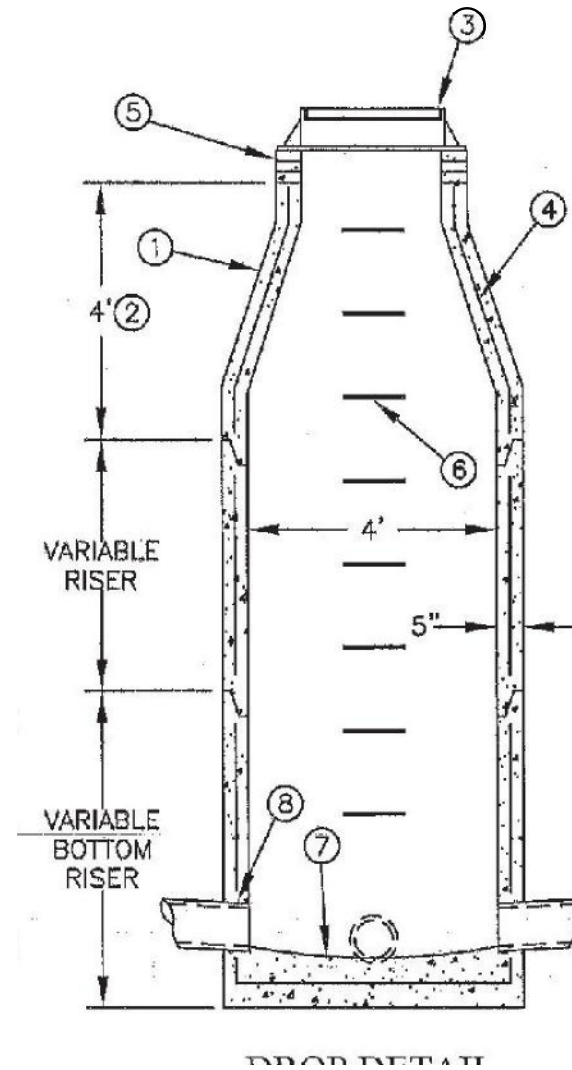


# ROOF DRAIN CONNECTION



NOT TO SCALE

# OUTSIDE DROP MANHOLE



## NOTES:

- ① CONE SHALL BE ECCENTRIC. MnDOT PLATE NO. 4005 TYPE B CONE SECTION.
- ② CONE SECTION HEIGHT MAY VARY AS REQUIRED FOR SPECIFIC MH.
- ③ REFER TO PLANS AND/OR SPECIAL PROVISIONS FOR FRAME AND LID TYPE.
- ④ REINFORCING SHALL BE A MINIMUM OF SINGLE LINE STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN EACH DIRECTION.
- ⑤ HIGH DENSITY POLYETHYLENE ADJUSTING RINGS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS STARTING ON A SOLID, CLEANED CONE SECTION OF THE INPLACE MANHOLE. THE OUTSIDE OF THE ENTIRE RING SECTION SHALL BE SEALED TO THE STRUCTURE WITH A UNI-BAND (RUBBER) SEALING SYSTEM.
- ⑥ STEPS, ORIENTED ON THE UPSTREAM SIDE OF THE MH, ARE SPACED 16" O.C. AND SHALL CONFORM TO MnDOT PLATE NO. 4180.
- ⑦ MONOLITHIC BASE AND INVERTS SUBJECT TO APPROVAL BY THE ENGINEER. FIELD POURED INVERTS AND/OR SEPARATE BASE SLAB MAY BE REQUIRED IN SOME INSTANCES. INVERT CHANNEL DEPTH SHALL NOT BE LESS THAN 1/2 THE PIPE SIZE.
- ⑧ WATER TIGHT SEAL SHALL CONFORM TO MnDOT PLATE NO. 4007.

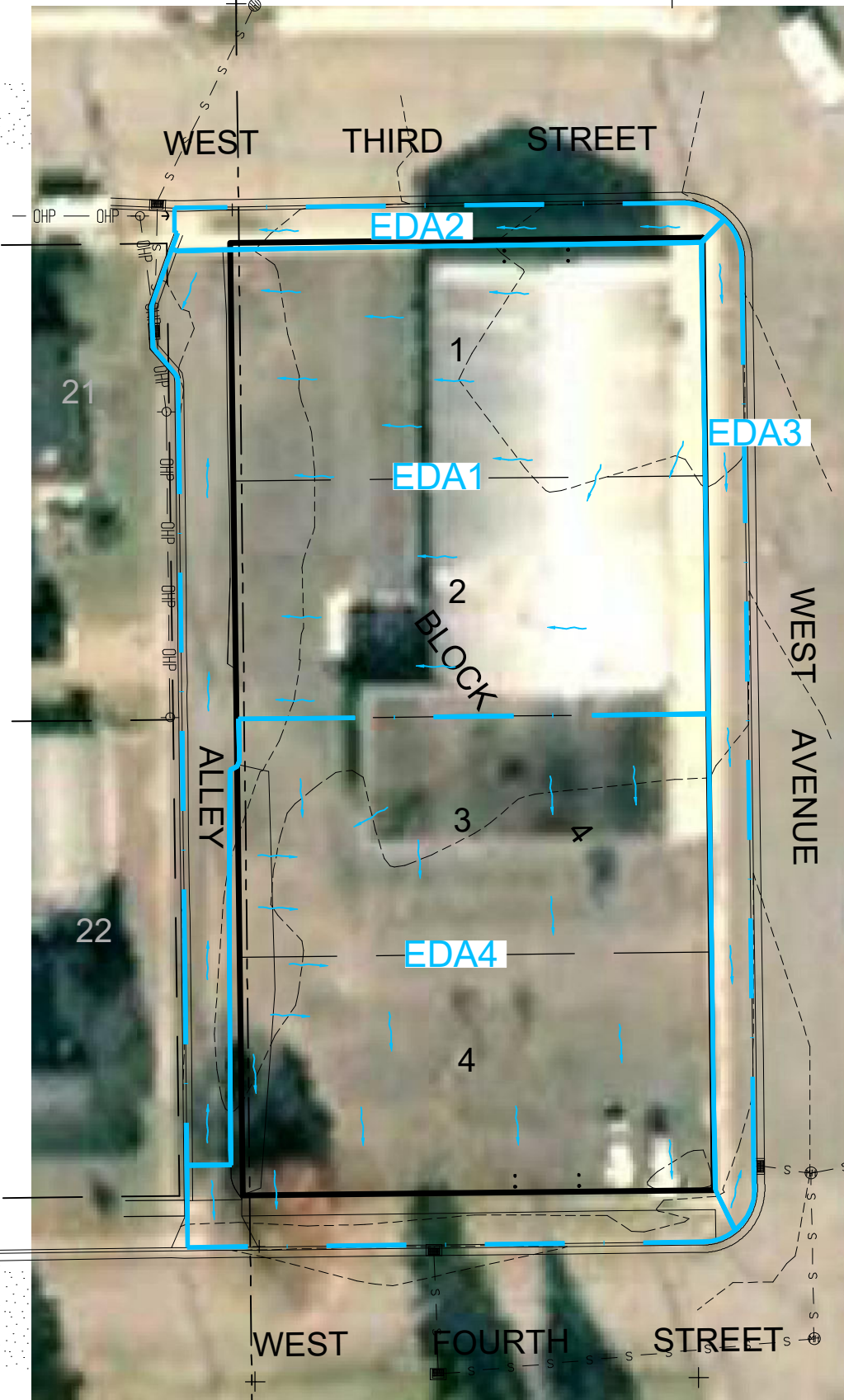
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# SANITARY SEWER MANHOLE

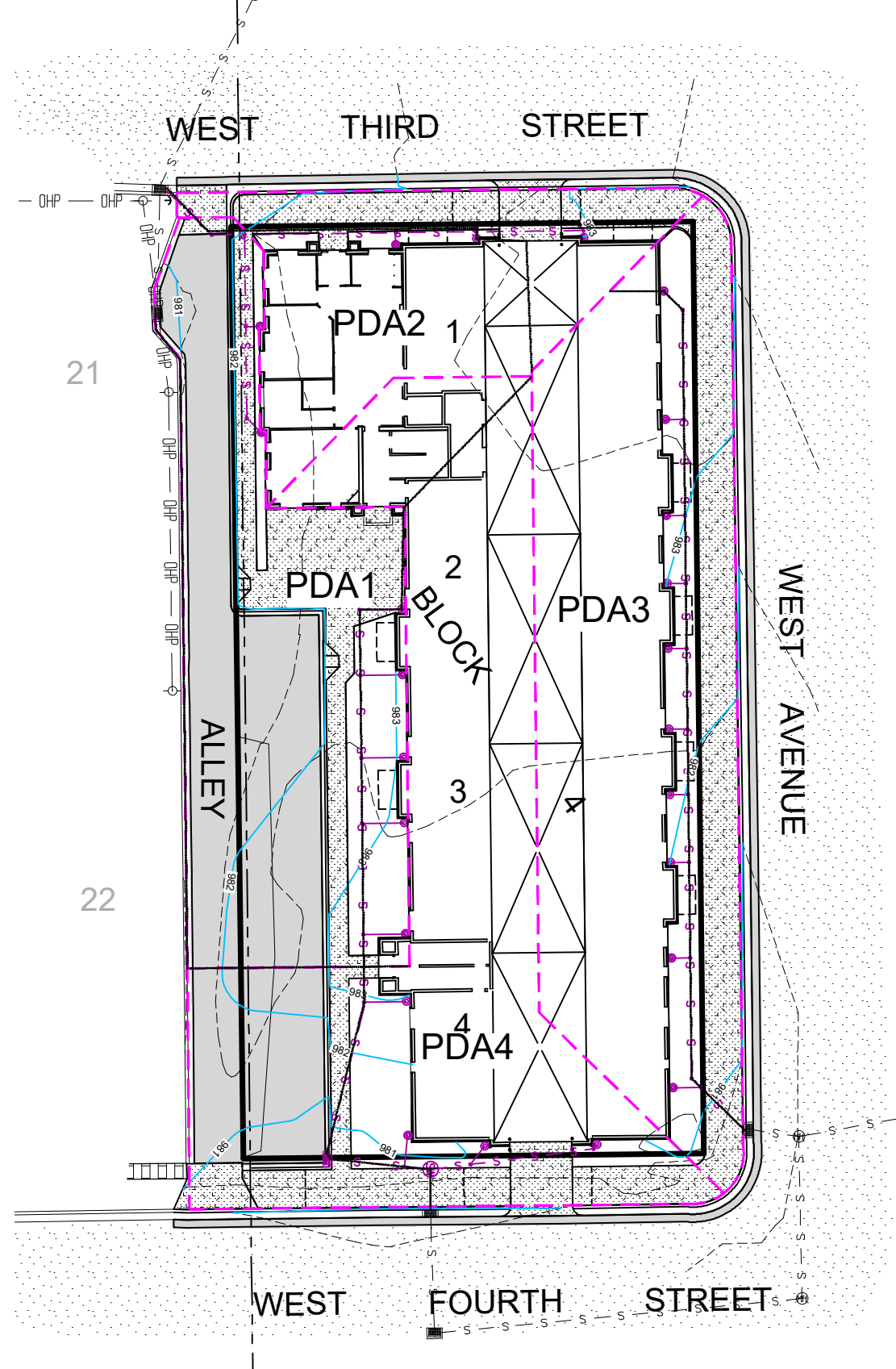
PRE DEVELOPMENT RUNOFF

LEGEND

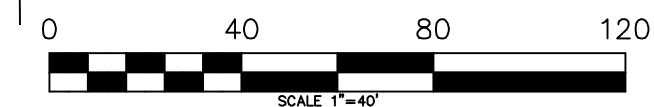
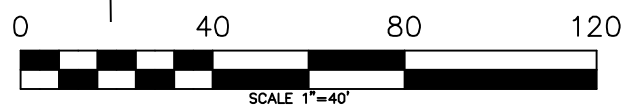
POST DEVELOPMENT RUNOFF



- BOUNDARY LINE
- LOT LINE
- DRAINAGE AND UTILITY EASEMENT
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING STORM SEWER LINE AND CATCH BASIN
- EXISTING CONTOUR AND ELEVATION
- PROPOSED FENCE
- PROPOSED STEP IN FINISHED FLOOR ELEVATION
- PROPOSED CONTOUR AND ELEVATION
- EXISTING BITUMINOUS
- PROPOSED BITUMINOUS
- PROPOSED BUILDING
- DENOTES EXISTING DRAINAGE AREA
- DENOTES EXISTING DRAINAGE AREA FLOW PATH
- DENOTES SURFACE WATER FLOW DIRECTION
- DENOTES PROPOSED DRAINAGE AREA
- DENOTES PROPOSED DRAINAGE AREA FLOW PATH



CONTRIBUTING DRAINAGE AREAS			
<b>EDA1</b> 0.396 ACRES 0.396 ACRES TCL: 410 FT AV SLOPE = 2.38% CN = 98 LFP = 224 FT TC = 2.9 MIN	<b>EDA2</b> 0.032 ACRES 0.032 ACRES TCL: 62 FT AV SLOPE = 4.38% CN = 98 LFP = 157 FT TC = 1.6 MIN	<b>EDA3</b> 0.057 ACRES 0.057 ACRES TCL: 58 FT AV SLOPE = 2.34% CN = 98 LFP = 248 FT TC = 3.2 MIN	<b>EDA4</b> 0.378 ACRES 0.378 ACRES TCL: 454 FT AV SLOPE = 2.76% CN = 98 LFP = 208 FT TC = 2.6 MIN
<b>PDA1</b> 0.20 ACRES 0.17 ACRES IMPERVIOUS TCL: 325 FT AV SLOPE = 3.81% AV CN = 68.5 LFP = 230 FT TC = 3.7 MIN	<b>PDA2</b> 0.12 ACRES 0.11 ACRES IMPERVIOUS TCL: 325 FT AV SLOPE = 2.50% AV CN = 68.5 LFP = 134 FT TC = 2.5 MIN	<b>PDA3</b> 0.25 ACRES 0.21 ACRES IMPERVIOUS TCL: 2539 FT AV SLOPE = 2.33% AV CN = 68.5 LFP = 238 FT TC = 4.8 MIN	<b>PDA4</b> 0.28 ACRES 0.27 ACRES IMPERVIOUS TCL: 3653 FT AV SLOPE = 2.91% AV CN = 68.5 LFP = 264 FT TC = 3.4 MIN
TOTAL DRAINAGE AREA= 0.863 ACRES EXISTING CONDITIONS HISTORICAL IMPERVIOUS AREA= 0.863 ACRES (100%) PROPOSED IMPERVIOUS AREA= 0.76 ACRES (88.06%) DECREASE OF IMPERVIOUS AREA FROM HISTORICAL= 0.103 ACRES			
PRE DEVELOPMENT RUNOFF			
DA	Q2 CFS	Q10 CFS	Q100 CFS
1	1.88	2.90	5.12
2	0.15	0.24	0.42
3	0.27	0.41	0.73
4	1.81	2.80	4.94
<b>TOTAL ORIGINAL FINAL PLAT GRADING PLAN RUNOFF*</b>	4.11	6.35	11.21
POST DEVELOPMENT RUNOFF			
DA	Q2 CFS	Q10 CFS	Q100 CFS
1	0.71	1.23	2.36
2	0.52	0.84	1.54
3	0.84	1.46	2.80
4	1.25	1.97	3.52
<b>TOTAL POST DEVELOPMENT RUNOFF*</b>	3.32	5.50	10.22
DEVELOPMENT RUNOFF SUMMARY			
	Q2 CFS	Q10 CFS	Q100 CFS
<b>PRE DEVELOPMENT RUNOFF</b>	4.11	6.35	11.21
<b>TOTAL POST DEVELOPMENT RUNOFF*</b>	3.32	5.50	10.22
<b>TOTAL CHANGE (DECREASE)</b>	0.79	0.85	0.99



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DESIGNED SPD\SPV  
 DRAWN SPD  
 CHECKED SPV

REVISED	BY	DATE

LATEST REVISION:  
 Prepared For:  
**ANDY BAARTMAN**  
 A-1 CLEANING  
 P.O.B. 31  
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 PHONE: 651-301-5103

**ZUMBROTA APARTMENTS**  
**ZUMBROTA, MN**

**EXISTING AND PROPOSED HYDRAULIC CONDITIONS**  
**SHEET 17 OF 17 SHEETS**