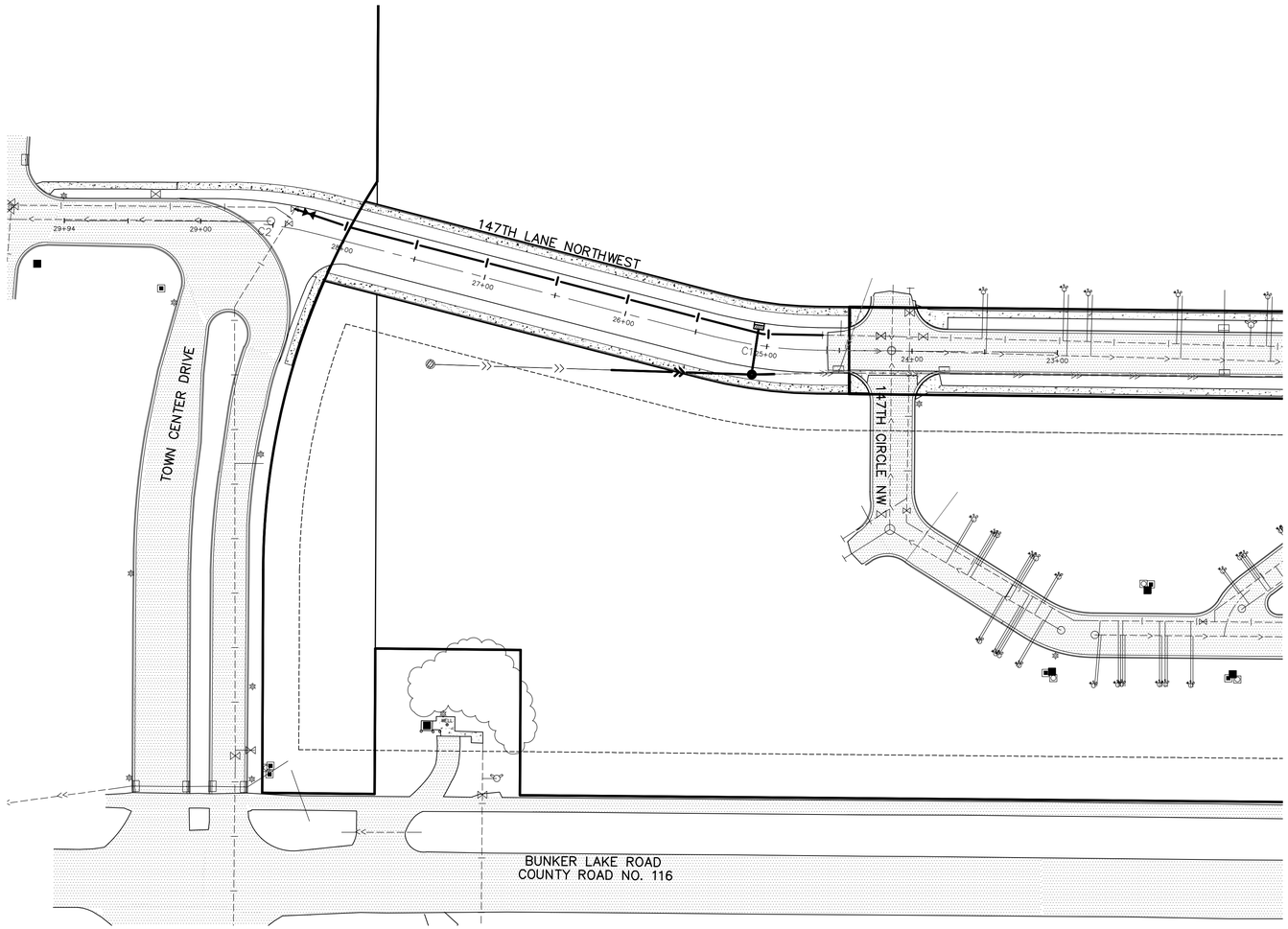
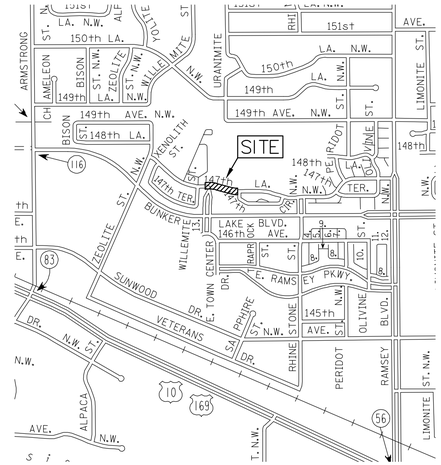
SEASONS OF RAMSEY
147TH LANE NORTHWEST
FINAL UTILITY & STREET CONSTRUCTION PLAN
RAMSEY, MINNESOTA

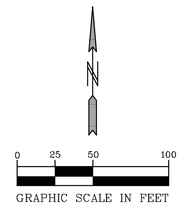
LEGEND

EXISTING	PROPOSED	FUTURE	DESCRIPTION
			SANITARY MANHOLE
			EXISTING SANITARY SEWER
			PROPOSED SANITARY SEWER
			FUTURE SANITARY SEWER
			HYDRANT
			GATE VALVE
			REDUCER
			EXISTING WATERMAIN
			PROPOSED WATERMAIN
			FUTURE WATERMAIN
			CATCH BASIN
			BEEHIVE
			STORM MANHOLE
			FLARED END SECTION
			CONTROL STRUCTURE
			EXISTING STORM SEWER
			PROPOSED STORM SEWER
			FUTURE STORM SEWER
			SURMOUNTABLE CURB & GUTTER
			B-STYLE CURB & GUTTER
			RIBBON CURB & GUTTER
			PHASE LINE
			EASEMENT LINE
902			EXISTING 2' CONTOUR LINE
900			EXISTING 10' CONTOUR LINE
	902		PROPOSED 2' CONTOUR LINE
	900		PROPOSED 10' CONTOUR LINE
OUTLET=987.0			POND OUTLET LINE
HWL=900.2			POND HIGH WATER LINE
	84.3		PROPOSED SPOT ELEVATION
			EMERGENCY OVERFLOW
			DELINEATED WETLAND LINE
			FEMA FLOODPLAIN BOUNDARY
			STANDARD EROSION CONTROL
			HEAVY-DUTY EROSION CONTROL
			TREE FENCE
			RETAINING WALL
			CONSERVATION AREA SIGN
	W		WETLAND BUFFER SIGN
			EX. CULVERT
oh		oh	EX. OVERHEAD UTILITY LINES
tv		tv	EX. UNDERGROUND TELEVISION LINE
t		t	EX. UNDERGROUND TELEPHONE LINE
fo		fo	EX. UNDERGROUND FIBER OPTIC LINE
e		e	EX. UNDERGROUND ELECTRIC LINE
g		g	EX. UNDERGROUND GAS LINE
x		x	EX. FENCE (BARBED WIRE)
#		#	EX. FENCE (CHAIN LINK)
[]		[]	EX. FENCE (WOOD)
			EX. CAST IRON MONUMENT
			EX. ELECTRIC BOX
			EX. FLAG POLE
			EX. NATURAL GAS METER
			EX. HAND HOLE
			EX. FOUND IRON PIPE
			EX. JUDICIAL LAND MARK
			EX. LIGHT POLE
			EX. PK NAIL
			EX. UTILITY POLE
			EX. LAWN SPRINKLER VALVE
			EX. LAWN SPRINKLER HEAD
			EX. SEMAPHORE
			EX. SERVICE
			EX. TELEPHONE BOX
			EX. TEST HOLE
			EX. TELEVISION BOX
			EX. WATER WELL
			EX. MONITORING WELL
			EX. MAILBOX
			EX. CONTROL POINT
			EX. SPIKE
			EX. SIGN
			EX. CLEANOUT
			EX. SIGNIFICANT TREE
			EX. TREE LINE
			EX. GRAVEL SURFACE
			EX. BITUMINOUS SURFACE
			EX. CONCRETE SURFACE
			SELECT BACKFILL MATERIAL
			GRAVEL CONST. ENTRANCE





LOCATION MAP



GRAPHIC SCALE IN FEET

SHEET INDEX

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2422 Enterprise Drive
Mendota Heights, MN 55120
(651) 681-1914
Fax: 681-9488
www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Name John M. Molinaro
Reg. No. 45831 Date 1-18-13

Revisions

Date	1-18-13
Designed	JMM
Drawn	JMM

COVER SHEET

SEASONS OF RAMSEY LP
3601 18TH STREET SOUTH, SUITE 117
ST.CLOUD, MINNESOTA 56301

SEASONS OF RAMSEY
RAMSEY, MINNESOTA

1 OF 5

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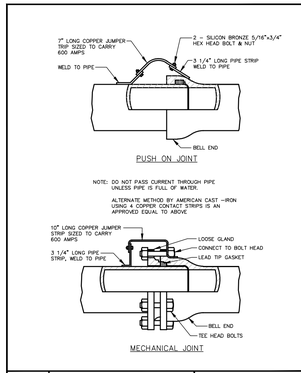
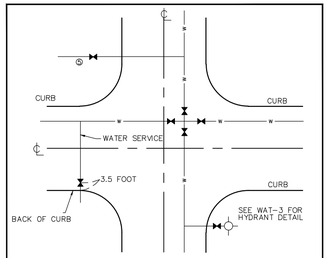
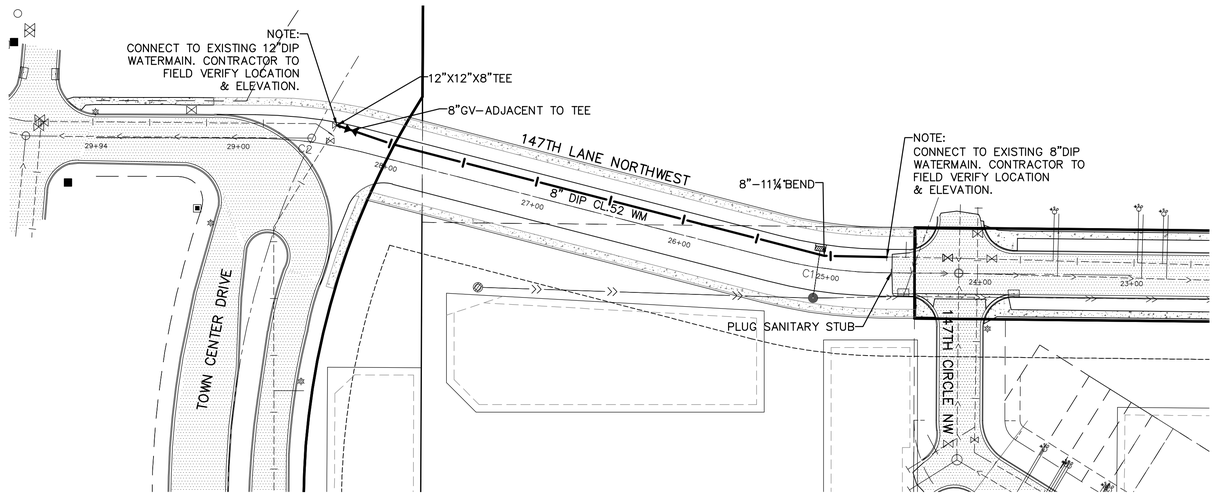


APPROVED	STANDARD DETAILS
DATE 7-93	JOINT CONNECTION FOR ELECTRICAL CONDUCTIVITY
	CITY PLATE No. WAT-1



NOTES:
1. VALVES TO BE CLUSTERED AT CROSS ON THE TEE BY PLACING IMMEDIATELY ADJACENT TO FITTINGS.
2. VALVE EXTENSIONS SHALL BE REQUIRED SUCH THAT VALVE OPERATOR NUT IS WITHIN 1 FOOT OF FINISHED GRADE.
3. WATERMAIN TO TO LOCATED ON NORTH AND EAST SIDES OF STREET 10 FEET FROM CENTERLINE.
4. ALL SERVICE VALVES IN ROAD WAY SHALL BE 3.5 FOOT FROM BACK OF CONCRETE CURB.
5. ALL VALVES NOT IN BITUMINOUS PAVEMENT SHALL BE MARKED WITH A BLUE 5 FOOT CARSONITE MARKER.

APPROVED	STANDARD DETAILS
DATE 3-2004	GENERAL WATERMAIN VALVE LOCATION
	CITY PLATE No. WAT-2

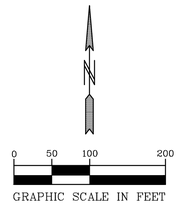


CONSTRUCTION NOTES
1. 6" & 8" DIP WATERMAIN SHALL BE CL 52. 12" DIP WATERMAIN SHALL BE CL. 52.
2. ALL FITTINGS SHALL HAVE MEGA LUGS. (SEE JOINT CHART)
3. ALL EXISTING UTILITIES HAVE BEEN REMOVED DURING SITE DEMOLITION.
4. CONTRACTOR IS RESPONSIBLE FOR TRENCH DESIGN & O.S.H.A. REQUIREMENTS.
5. ALL CASTINGS & VALVE BOXES TO BE SET 0.05' BELOW FG ELEVATION.

RESTRAINED JOINT REQUIREMENTS

PIPE DIAMETER	TEES AND CROSSES	45 BENDS	22.5 AND 11.25 BENDS	DEAD ENDS
6 INCH				40 FEET
8 INCH				40 FEET
12 INCH	27 FEET	12 FEET	10 FEET	66 FEET
16 INCH	35 FEET	15 FEET	10 FEET	86 FEET
20 INCH	42 FEET	18 FEET	10 FEET	101 FEET
24 INCH	50 FEET	21 FEET	10 FEET	119 FEET
30 INCH	50 FEET	21 FEET	10 FEET	119 FEET

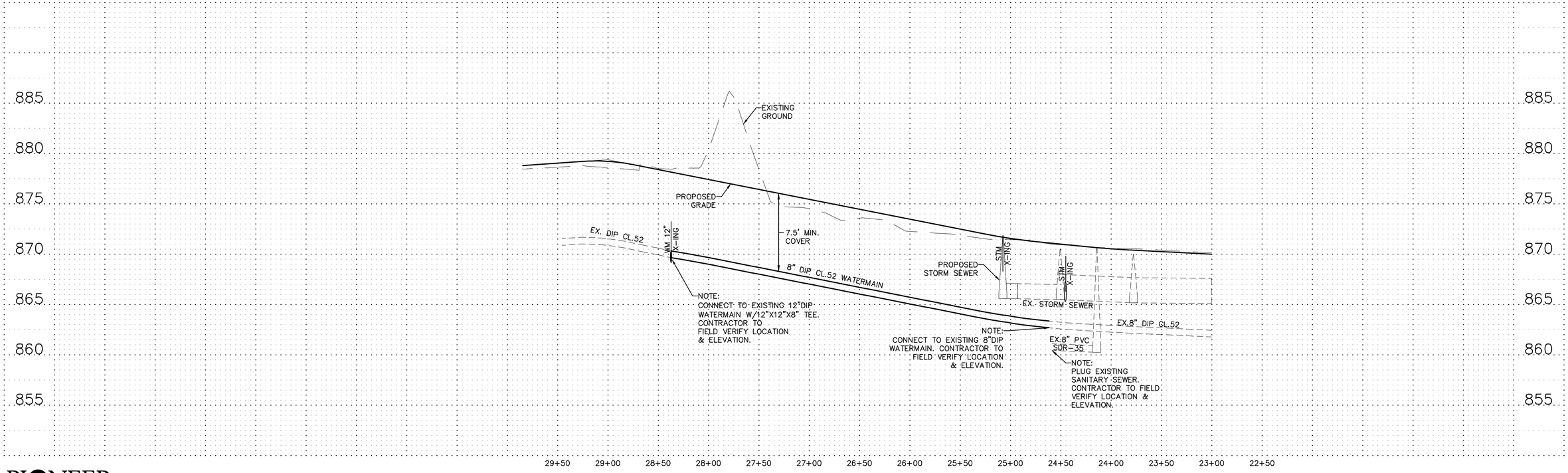
NOTE: FIELD CONSTRUCTED RESTRAINED JOINTS CONSIST OF THE RESPECTIVE SIZE GLAND ON THE BELL AND MEGALUG DEVICE ON THE SPIGOT WITH 3/4" TIE RODS CONNECTING THEM. SEE STANDARD SPECIFICATIONS FOR THE NUMBER OF RODS REQUIRED PER SIZE OF PIPE.



BENCH MARK

T.N.H. LOCATED AT NORTHEAST CORNER OF COUNTY ROAD NO. 56 AND COUNTY ROAD NO. 116. ELEV.=875.40

T.N.H. LOCATED 670FT WEST OF THE INTERSECTION OF COUNTY ROAD NO. 56 AND COUNTY ROAD NO. 116. ELEV.=879.95



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WATERMAIN PLAN

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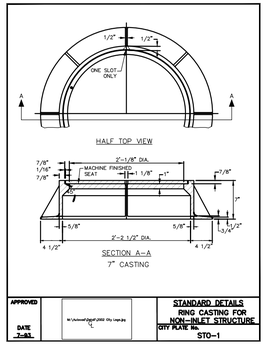
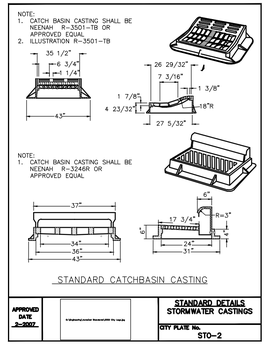
SEASONS OF RAMSEY
RAMSEY, MINNESOTA

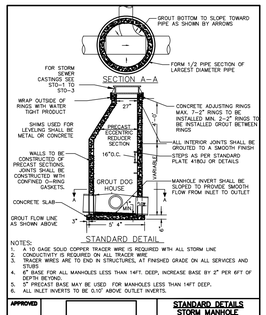
2 OF 5



APPROVED | DATE 1-2011 | STANDARD DETAILS RING CASTING FOR NON-INLET STRUCTURE | CITY PLATE No. STO-1

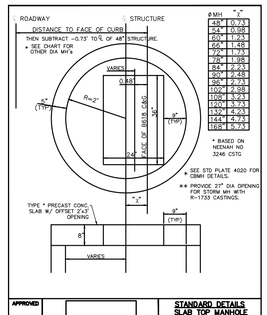


APPROVED | DATE 4-2007 | STANDARD DETAILS STORM/WATER CASTINGS | CITY PLATE No. STO-2

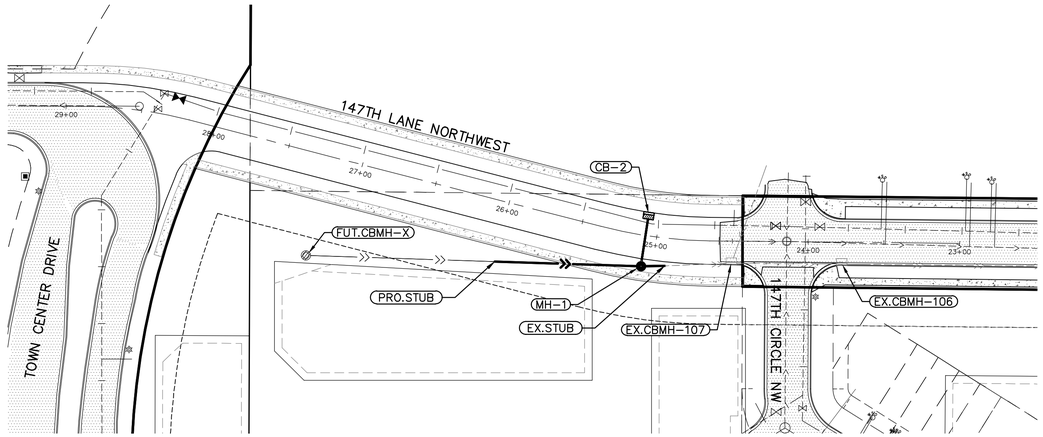


NOTES:
1. A 10 GAGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL STORM LINE
2. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
3. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS
4. STEPS ARE FOR ALL MANHOLES LESS THAN 14FT. DEEP, INCREASE BASE BY 2" PER 6FT OF ADDITIONAL BOTTOM.
5. 5" PRECAST BASE MAY BE USED FOR MANHOLES LESS THAN 14FT DEEP.
6. ALL INLET INVERTS TO BE 0.10" ABOVE OUTLET INVERTS.

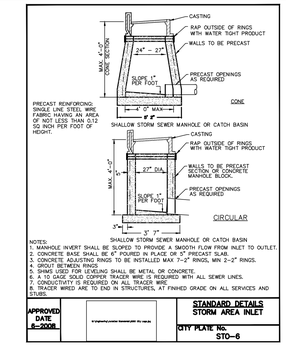
APPROVED | DATE 1-2008 | STANDARD DETAILS STORM MANHOLE CATCH BASIN | CITY PLATE No. STO-4



APPROVED | DATE 4-2008 | STANDARD DETAILS SLAB TOP MANHOLE FOR CBMH | CITY PLATE No. STO-5

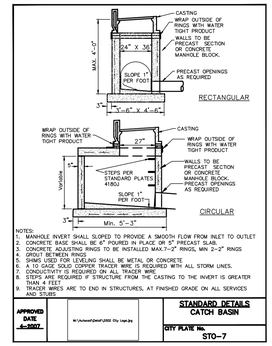


STRUCTURE TABLE			
STRUCTURE NAME	STRUCTURE SIZE	NEENAH CASTING OR EQUAL	
CB-2	36"X24"	R-3246 R	OR APPROVED EQUAL
MH-1	48" DIA.	SEE DETAIL	



NOTES:
1. MANHOLE INVERT SHALL BE SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET.
2. CONCRETE BASE SHALL BE 6" POURED IN PLACE OR 5" PRECAST SLAB.
3. CONCRETE ADJUSTING RINGS TO BE INSTALLED MAX 7-2" RINGS, MIN 2-2" RINGS
4. GROUT BETWEEN RINGS.
5. SHIMS USED FOR LEVELING SHALL BE METAL OR CONCRETE.
6. A 10 GAGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL SEWER LINES.
7. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE.
8. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS.

APPROVED | DATE 4-2008 | STANDARD DETAILS STORM AREA INLET | CITY PLATE No. STO-6



NOTES:
1. MANHOLE INVERT SHALL SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET
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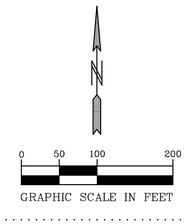
4. GROUT BETWEEN RINGS.
5. SHIMS USED FOR LEVELING SHALL BE METAL OR CONCRETE
6. A 10 GAGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL STORM LINES.
7. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE.
8. STEPS ARE REQUIRED IF STRUCTURE FROM THE CASTING TO THE INVERT IS GREATER THAN 4 FEET.
9. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS.

APPROVED | DATE 4-2007 | STANDARD DETAILS CATCH BASIN | CITY PLATE No. STO-7

STORM SEWER NOTES:

1. PROVIDE CASTINGS MEETING STD-1 OR APPROVED EQUAL ON ALL MANHOLES UNLESS OTHERWISE NOTED. SEE RAMSEY STANDARD PLATE STD-1 TO STD-3
2. PROVIDE 24"X36" SLAB OPENING FOR R-3067-V NEENAH CASTINGS ON ALL CATCH BASIN MANHOLES UNLESS OTHERWISE NOTED.
3. FINAL STRUCTURE OFF SET TO BE VERIFIED BY CONTRACTOR AND INSPECTOR BASED ON MATERIAL SUPPLIED TO PROJECT. FIELD STAKING SHALL BE SET ACCORDING TO BACK-OF-CURB.
4. INLET CASTINGS SHALL BE SET 0.17' BELOW GUTTERLINE GRADE.
5. CONCRETE PIPE MUST BE BEDDED TO A MINIMUM OF THE CLASS C BEDDING REQUIREMENTS. SEE RAMSEY STANDARD SPECS.



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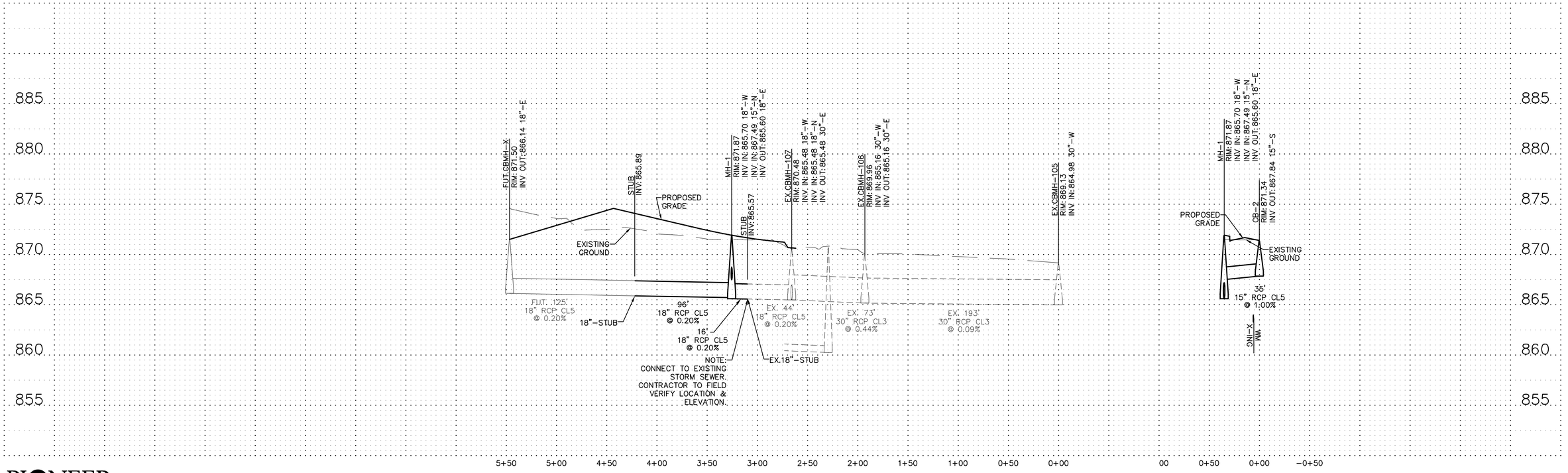

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Revisions

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STORM SEWER PLAN

SEASONS OF RAMSEY LP
3601 18TH STREET SOUTH, SUITE 117
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SEASONS OF RAMSEY
RAMSEY, MINNESOTA

3 OF 5

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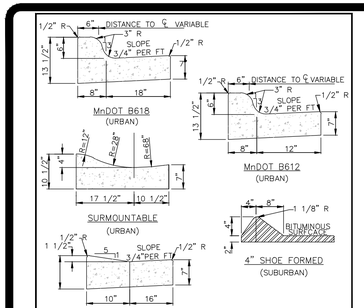
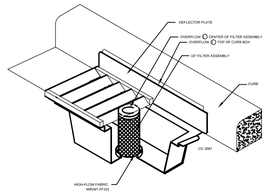


NOTES:

1. ON WEAR COURSE MILL THE EXISTING BITUMINOUS 1.5" BY 24" IN FRONT OF THE REPLACEMENT CURB.
2. ON BASE COURSE SAW CUT AND REMOVE EXISTING BITUMINOUS 18" IN FRONT OF THE REPLACEMENT CURB.

APPROVED DATE		STANDARD DETAILS CURB AND GUTTER
04-12		CITY PLATE No. STR-1

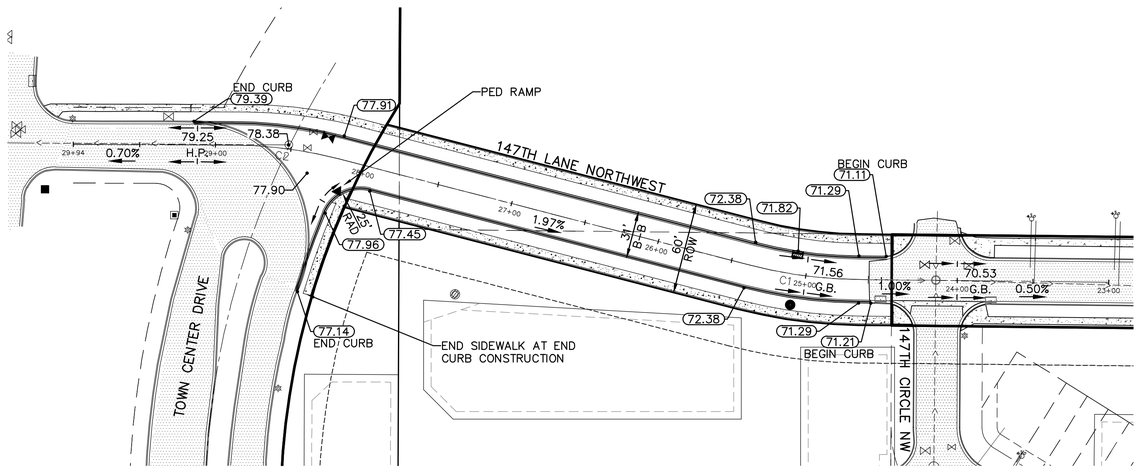


INLET PROTECTION – WIMCO OR EQUAL

N.T.S.

NOTE:
THIS INLET PROTECTION SHALL BE USED IMMEDIATELY FOLLOWING CURB & GUTTER CONSTRUCTION. INLET PROTECTION SHALL REMAIN INSTALLED AND MAINTAINTED UNTIL ALL HOME CONSTRUCTION IS COMPLETE.

APPROVED DATE X		STANDARD DETAILS WIMPCO
		CITY PLATE No. STR-21



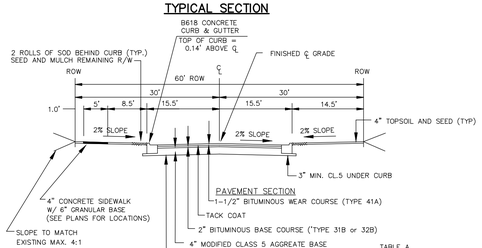
CURB LEGEND

- 08.15 = TOP OF CURB ELEVATION FOR D412 CURB
- (08.32) = TOP OF CURB ELEVATION FOR B618 CURB
- 07.82 = BITUMINOUS ELEVATION
- = SURMOUNTABLE C&G (CITY PLATE STR-1)
- = B618 CURB & GUTTER (CITY PLATE STR-1)
- = BITUMINOUS EDGE
- ▶ = PED. RAMP (MNDOT 7036F)

CURVE TABLE

CURVE	DELTA	LENGTH	RADIUS	TANGENT	PC	PT
C1	13°53'26"	72.73	300.00	36.54	24+64.94	25+37.67
C2	14°15'23"	70.79	284.50	35.58	28+18.08	28+88.87

TYPICAL SECTION

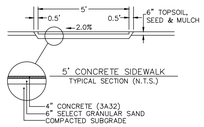


Note: The aggregate base construction will be accepted for payment in accordance with the provisions in table A.

Note: If the aggregate base fails to meet the Modified Class 5 Specifications the material can be corrected in place or removed and replaced with material that meets Modified Class 5 specifications.

TABLE A
MODIFIED CLASS 5 SPECIFICATIONS

	% PASSING
1"	100
3/4"	90 – 100
3/8"	50 – 80
No.4	35 – 70
No.10	20 – 60
No.40	10 – 35
No.200	5 – 10



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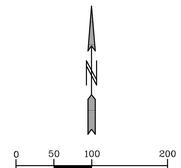
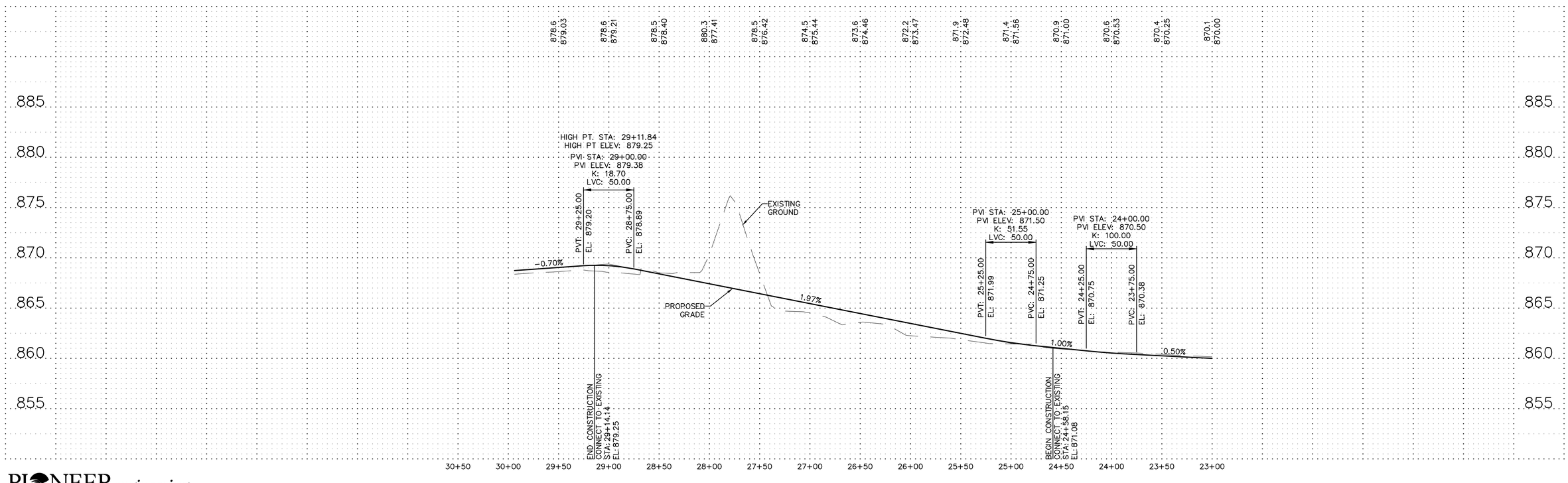


147TH LANE NORTHWEST



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SEASONS OF RAMSEY
RAMSEY, MINNESOTA

01-ENG-SHEET-112304-331.DWG

PHASE SEQUENCE

1. THE SIZE OF EACH FILL OPERATION WILL BE DETERMINED BY THE QUANTITY OF SOIL IMPORT.
2. EACH PHASE WILL CONSIST OF THE GRADING SEQUENCE OUTLINED BELOW.

GRADING SEQUENCE

1. DETERMINE SIZE OF FILL AREA BASED ON AVAILABLE SOIL
2. INSTALL ROCK CONSTRUCTION ENTRANCE
3. INSTALL PERIMETER SEDIMENT CONTROL DEVICES (SILT FENCE).
4. STRIP TOPSOIL, STOCKPILE AND STABILIZE IN BERM FOR FUTURE SPREADING.
5. DIG TEMPORARY SEDIMENT BASIN, BASIN TO BE 1800 CF/ACRE OF AREA STRIPPED. CLEAN TEMP BASIN ONCE 50% FULL.
6. ALL SOIL WILL BE TESTED FOR SUITABILITY FOR FILL PER THE BORROW PIT RECLAMATION PROTOCOL PRIOR TO BEING BROUGHT ONSITE.
7. ALL SOILS WILL BE COMPACTED PER THE BORROW PIT RECLAMATION PROTOCOL.
8. MAINTAIN DRAINAGE DURING GRADING OPERATION TO TEMPORARY SEDIMENT BASIN.
9. COMPLETE SITE GRADING PER PLAN.
10. RESPREAD TOPSOIL MAINTAIN A MINIMUM OF 4" DEPTH.
11. MAINTAIN DRAINAGE TO TEMP SEDIMENT BASIN UNTIL NEXT PHASE BEGINS.
12. STABILIZE DENUDED AREAS AND STOCKPILES WITHIN TIME FRAME LISTED IN EROSION PREVENTION PRACTICES

GENERAL NOTES

1. CONTRACTOR TO ADHERE TO ALL REQUIREMENTS OF THE MINNESOTA POLLUTION CONTROL AGENCY N.P.D.E.S. PERMIT, INCLUDING THE REQUIREMENT TO MINIMIZE THE AREA DISTURBED BY GRADING AT ANY GIVEN TIME AND TO COMPLETE TURF RESTORATION THE TIME REQUIRED BY THE PERMIT AFTER COMPLETION OF

2. A COPY OF THESE PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

3. BMP'S REFER TO EROSION AND SEDIMENT CONTROL PRACTICES DEFINED IN THE MPCA PROTECTING WATER QUALITY IN URBAN AREAS AND THE MINNESOTA CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL PLANNING HANDBOOK.

4. ALL EROSION AND SEDIMENT CONTROL FACILITIES (BMP'S) SHALL BE INSTALLED AND IN OPERATION PRIOR TO LAND DISTURBANCE ACTIVITIES. SOME EROSION CONTROLS SUCH AS CHECK DAMS AND TEMPORARY SILT PONDS MAY BE INSTALLED AS GRADING OCCURS IN THE SPECIFIC AREA. THEY SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR EROSION HAS PASSED.

5. THE BMP'S SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE PERMITTEE SHALL ANTICIPATE THAT MORE BMP'S WILL BE NECESSARY TO ENSURE EROSION AND SEDIMENT CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE PERMITEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY CONSTRUCTION ACTIVITIES AND/OR CLIMATIC EVENTS AND TO PROVIDE ADDITIONAL BMP'S OVER AND ABOVE THE MINIMUM REQUIREMENTS SHOWN ON THE PLANS THAT MAY BE NEEDED TO PROVIDE EFFECTIVE PROTECTION OF WATER AND SOIL RESOURCES.

6. ALL TREES NOT LISTED FOR REMOVAL SHALL BE PROTECTED. DO NOT OPERATE EQUIPMENT WITHIN THE DRIP LINE, ROOT ZONES OR WITHIN TREE PROTECTION FENCE AREAS.

7. WHEREVER POSSIBLE, PRESERVE THE EXISTING TREES, GRASS AND OTHER VEGETATIVE COVER TO HELP FILTER RUNOFF.

8. OPERATE TRACK EQUIPMENT (DOZER) UP AND DOWN EXPOSED SOIL SLOPES ON FINAL PASS, LEAVING TRACK GROOVES PERPENDICULAR TO THE SLOPE. DO NOT BACK-BLADE. LEAVE A SURFACE ROUGH TO MINIMIZE EROSION.

9. TEMPORARY SEED SHALL BE DONE IN ACCORDANCE TO MNDOT 2575 & 387,; CONSISTING OF:
   - MNDOT MIX 150 @ 40 LBS. PER ACRE OR APPROVED EQUAL.
   - MULCH SHALL BE MNDOT TYPE 3 @ 2 TONS PER ACRE OR APPROVED EQUAL AND DISK ANCHORED IN PLACE OR APPROVED EQUAL, INSTALLED TO MINIMUM 90% COVERAGE OF THE SURFACE AREA DISTURBED.
   - TYPE 1 FERTILIZER, 10-10-20 @ 200 LBS. PER ACRE

10. PERMANENT TURF RESTORATION SHALL BE DONE IN ACCORDANCE WITH MNDOT 2575 & 3876 CONSISTING OF:
    - MNDOT MIXTURE 240 AT 75 POUNDS PER ACRE.
    - MULCH SHALL BE MNDOT TYPE 3 @ 2 TONS PER ACRE OR APPROVED EQUAL AND DISK ANCHORED IN PLACE OR APPROVED EQUAL, INSTALLED TO MINIMUM 90% COVERAGE OF THE SURFACE AREA DISTURBED.MULCH AT 90 % COVERAGE WITH DISC ANCHOR.
    - TYPE 3 FERTILIZER, 22-5-10 80%W.I.N @ 350 LBS PER ACRE.

11. SLOPES AT 3:1 OR STEEPER, AND/OR WHERE INDICATED ON THE PLANS SHALL BE SEEDED AND HAVE AN EROSION CONTROL BLANKET TYPE 3 INSTALLED OR MAY BE HYDROSEEDED WITH TACKIFER MULCH.

12. THE CONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS.

13. IF BLOWNG DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS.

14. WITHIN 7 DAYS OF COMPLETION OF THE SITE GRADING OPERATIONS THE ENTIRE SITE (EXCEPT ROADWAYS) SHALL HAVE BEEN SEEDED AND MULCHED AND SILT FENCE SHALL INSTALLED AROUND ALL PONDS.

15. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY DISPOSED OF WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

CONSTRUCTION ACTIVITY REQUIREMENTS

A. EROSION PREVENTION PRACTICES

1. THE CONTRACTOR SHALL IMPLEMENT CONSTRUCTION PHASING, VEGETATIVE BUFFER STRIPS, HORIZONTAL SLOPE GRADING, AND OTHER CONSTRUCTION PRACTICES THAT MINIMIZE EROSION. THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE DELINEATED (E.G. WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.) ON THE DEVELOPMENT SITE BEFORE WORK BEGINS.

2. ALL EXPOSED SOIL AREAS WITHIN 200 FEET OF A SURFACE WATER OR ANY STORMWATER CONVEYANCE SYSTEM WHICH IS CONNECTED TO A SURFACE WATER MUST BE STABILIZED WITHIN 7 DAYS (STEEPER THAN 3:1 SLOPES), 14- DAYS (10:1 TO 3:1 SLOPES), OR 21 DAYS (FLATTER THAN 10:1). THESE AREAS INCLUDE POND SIDE SLOPES, EXPOSED SOIL AREAS WITH A POSITIVE SLOPE TO A CURB AND GUTTER SYSTEM, STORM SEWER INLET, DRAINAGE DITCH, OR OTHER SYSTEM THAT DISCHARGES TO A SURFACE WATER.

3. THE NORMAL WETTED PERIMETER OF ANY DRAINAGE DITCH MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE TO ANY SURFACE WATER (WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER).

4. PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY. OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.

B. SEDIMENT CONTROL PRACTICES

1. SEDIMENT CONTROL PRACTICES MUST MINIMIZE SEDIMENT ENTERING SURFACE WATERS. DITCHES AND SEDIMENT BASINS REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS. IF DOWN GRADE SYSTEM IS OVERLOADED, ADDITIONAL UPGRADE PRACTICES MUST BE INSTALLED, AND THE SWPPP MUST BE AMENDED. THERE SHALL BE NO UNBROKEN SLOPE LENGTH OF GREATER THAN 75 FEET FOR SLOPES WITH A GRADE OF 3:1 OR STEEPER. SLOPES MAY BE BROKEN WITH SILT FENCE, ROCK CHECK DAMS, COMPOST SNAKES, OR OTHER APPROVED METHODS AND/OR AS SHOWN ON THE EROSION CONTROL PLAN.

2. SEDIMENT CONTROL PRACTICES MUST BE ESTABLISHED ON DOWNGRADE PERIMETERS BEFORE UPGRADE LAND DISTURBING ACTIVITIES BEGIN.

3. THE TIMING OF SEDIMENT CONTROL PRACTICES MAY BE ADJUSTED TO ACCOMMODATE SHORT TERM ACTIVITIES. HOWEVER, THESE PRACTICES MUST BE INSTALLED BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE ACTIVITY IS NOT COMPLETE.

4. CONTRACTOR MUST PROTECT ALL STORM DRAIN INLETS BY APPROPRIATE BMP'S DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED.

5. TEMPORARY STOCKPILES MUST HAVE SILT FENCE AROUND THE PERIMETER OF THE BASE OF THE STOCKPILE AND CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORM WATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS OR DITCHES.

6. CONTRACTOR MUST INSTALL TEMPORARY (OR PERMANENT) SEDIMENTATION BASINS WHERE TEN OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION AND/OR AS SHOWN ON THE EROSION CONTROL PLAN.

C. DEWATERING AND SURFACE DRAINAGE

1. DEWATERING OR ANY TYPE OF SURFACE DRAINAGE THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE WATER MUST BE DISCHARGED TO AN APPROVED SEDIMENT BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. IF THE WATER CANNOT BE DISCHARGED TO A BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMP'S SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM LANDOWNERS. THE CONTRACTOR MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIP RAP, SAND BAGS, PLASTIC SHEETING, OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES.

2. ALL WATER FROM DEWATERING MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION, OR INUNDATION OF WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACT TO THE WETLAND.

D. INSPECTIONS AND MAINTENANCE

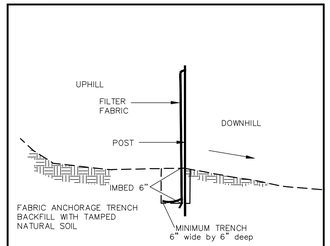
1. THE CONTRACTOR MUST APPOINT SOMEONE TO INSPECT THE CONSTRUCTION SITE ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF GREATER THAN 0.5 INCHES IN 24 HOURS. ALL INSPECTIONS MUST BE RECORDED IN WRITING AND RETAINED PER M.P.C.A. N.P.D.E.S. REQUIREMENTS. (NOTE: LOCAL JURISDICTION MAY REQUIRE A MORE FREQUENT INTERVAL OF INSPECTION.)

E. POLLUTION PREVENTION MANAGEMENT MEASURES

1. SOLID WASTE MUST BE DISPOSED OF PER M.P.C.A. REQUIREMENTS.

2. HAZARDOUS MATERIALS MUST BE STORED AND DISPOSED OF PER M.P.C.A. REGULATIONS.

3. EXTERNAL WASHING OF CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED AND WASTE PROPERLY DISPOSED OF. NO ENGINE DECREASING IS ALLOWED ON SITE.

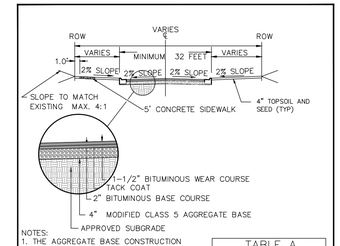


INSTALL AS PER FILTER FABRIC MANUFACTURER'S RECOMMENDATIONS

SILT FENCE DETAIL

NO SCALE

APPROVED DATE 2-2006		STANDARD DETAILS SILT FENCE
		CITY PLATE No. ERO-3

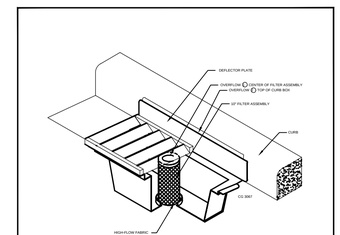


NOTES:
1. THE AGGREGATE BASE CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT IN ACCORDANCE WITH THE PROVISIONS IN TABLE A.
2. IF THE AGGREGATE BASE FAILS TO MEET THE MODIFIED CLASS 5 SPECIFICATIONS THE MATERIAL CAN BE CORRECTED IN PLACE OR REMOVED AND REPLACED WITH MATERIAL THAT MEETS MODIFIED CLASS 5 SPECIFICATIONS.
3. ALL SIDEWALKS ARE 6" THICK, IN AREAS WHERE THERE ARE NO PROPOSED DRIVEWAYS, 4" THICK WILL BE ALLOWED.
4. TOPSOIL, SEED AND MULCH ALL DISTURBED AREAS.

TABLE A
MODIFIED CLASS 5 SPECIFICATIONS

% PASSING	
1"	100
3/4"	90 - 100
3/8"	50 - 80
No.4	35 - 70
No.10	20 - 60
No.40	10 - 35
No.200	5 - 10

APPROVED DATE 6-2004		STANDARD DETAILS URBAN SECTION
		CITY PLATE No. STR-5

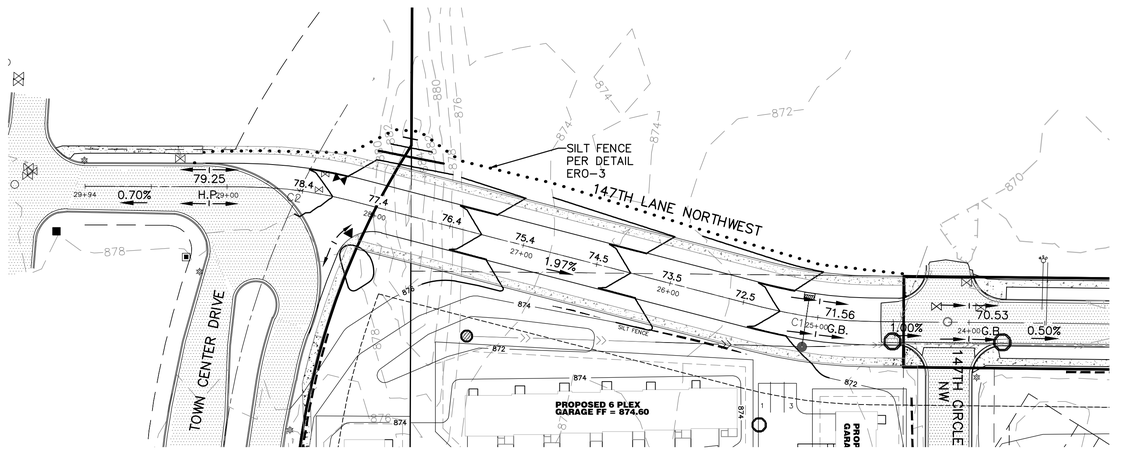


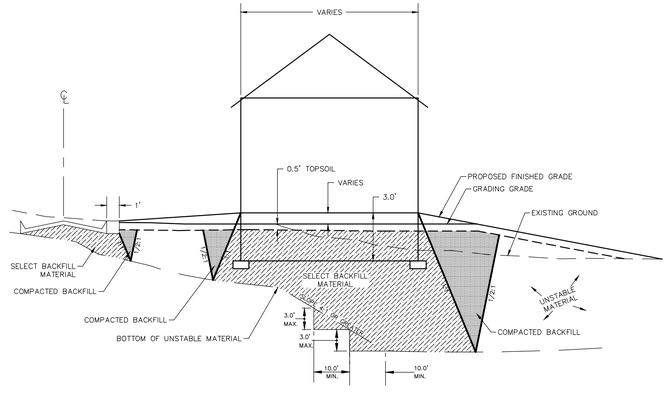
INLET PROTECTION - WIMCO OR EQUAL

N.T.S.

NOTE:
THIS INLET PROTECTION SHALL BE USED IMMEDIATELY FOLLOWING CURB & GUTTER CONSTRUCTION. INLET PROTECTION SHALL REMAIN INSTALLED AND MAINTAINTED UNTIL ALL HOME CONSTRUCTION IS COMPLETE.

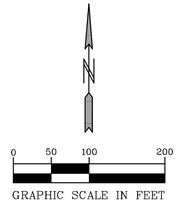
APPROVED DATE X		STANDARD DETAILS WIMPCO
		CITY PLATE No. STR-21





SUBGRADE CORRECTION DETAIL

NO SCALE



BENCH MARK

T.N.H. LOCATED AT NORTHEAST CORNER OF COUNTY ROAD NO. 56 AND COUNTY ROAD NO. 116. ELEV.=875.40

T.N.H. LOCATED 670FT WEST OF THE INTERSECTION OF COUNTY ROAD NO. 56 AND COUNTY ROAD NO. 116. ELEV.=879.95

01-ENG-SHEET-112304-GR.DWG

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CIVIL ENGINEERS LAND PLANNERS LAND SURVEYORS LANDSCAPE ARCHITECTS
2422 Enterprise Drive
Mendota Heights, MN 55120
(651) 681-1914
Fax: 681-9488
www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Name John M. Molinaro
Reg. No. 45831 Date 1-18-13

Revisions

Date	1-18-13
Designed	JMM
Drawn	JMM

GRADING & EROSION CONTROL PLAN

SEASONS OF RAMSEY LP
3601 18TH STREET SOUTH, SUITE 117
ST.CLOUD, MINNESOTA 56301

SEASONS OF RAMSEY
RAMSEY, MINNESOTA

5 OF 5