AMENDED
City of Stevens Point
REGULAR COUNCIL MEETING

Council Chambers **March 19, 2012**
County-City Building **7:00 P.M.**

1. Roll Call.

2. Salute to the Flag and Mayor's opening remarks.

3. Consideration and possible action of the minutes of the Common Council meeting of February 20, 2012 and the Special Common Council Meeting of February 27, 2012.

4. *Persons who wish to address the Mayor and Council on specific agenda items other than a "Public Hearing" must register their request at this time. Those who wish to address the Common Council during a "Public Hearing" are not required to identify themselves until the "Public Hearing" is declared open by the Mayor.

5. Persons who wish to address the Mayor and Council for up to three (3) minutes on a non-agenda item.

Consideration and Possible Action on the Following:

6. Resolution – Supporting the Community Access TV Preservation Act.

7. Ordinance Amendment - Amend Traffic and Vehicles Chapter of the RMC – Authority to permit school bus warning light activation (Section 9.01(a)).

8. Minutes and actions of the Plan Commission meeting of March 5, 2012.

9. Public Hearing – Conditional Use Permit – Request from US Cellular for a conditional use permit for the purposes of installing three new antennas to an existing tower and performing line work at 5348 Highway 10 East.

10. Resolution on the above.

11. Public Hearing – Conditional Use Permit – Request from US Cellular for a conditional use permit for the purposes of installing three new antennas to an existing tower and performing line work at 1900 Polk Street.

12. Resolution on the above.

13. Public Hearing – Conditional Use Permit – Request from the Stevens Point Water Department for a conditional use permit for the purposes of constructing a garage at 5431 Highway 66.

14. Resolution on the above.

15. Public Hearing - Amending Zoning Chapter of the RMC - Create a wellhead protection zone for Well 11 and amend the uses within the Wellhead Protection Overlay District (Section 23.02(4)(e)).

16. Ordinance Amendment on the above.

17. Public Hearing - Amending Zoning Chapter of the RMC- Amend the conditional use requirement for the co-location of antennas to a permitted use (Section 23.02(4)(d)).

18. Ordinance Amendment on the above.

19. Minutes and actions of the Public Protection Committee meeting of March 12, 2012.

20. Minutes and actions of the Finance Committee meeting of March 12, 2012.

*21. Approval of the four-party agreement for the repair of the McDill Dam.

22. Consideration of Tax Refund Claim – Walgreens.

23. Minutes and actions of the Board of Public Works meeting of March 12, 2012.

24. Ordinance Amendment – Amending Officials, Boards, Employees Chapter of the RMC - Creation of a Stormwater System (Section 3.35(1)).

25. Actions taken at the Special Board of Public Works meeting of March 19, 2012.

26. Minutes and actions of the Personnel Committee meeting of March 12, 2012.

27. Minutes and actions of the Board of Water & Sewage Commissioners meeting of March 12, 2012.

28. Minutes and actions of the Police and Fire Commission meeting of March 6, and the Special Police and Fire Commission meetings of February 23, March 13, 2012.

29. Minutes and actions of the Special Board of Park Commissioners meeting of March 12, 2012.

30. Statutory Monthly Financial Report of the Comptroller-Treasurer.

31. Adjournment.

RMC – Revised Municipal Code

Persons who wish to address the Common Council may make a statement as long as it pertains to a **specific** agenda item. Persons who wish to speak on an agenda item will be limited to a five (5) minute presentation. Any person who wishes to address the Common Council on a matter which is not on the agenda will be given a maximum of three (3) minutes and the time strictly enforced under the item, "Persons who wish to address the mayor and council on non-agenda items." Individuals should not expect to engage in discussion with members of the City Council and City staff.

Any person who has special needs while attending this meeting or needing agenda materials for this meeting should contact the City Clerk as soon as possible to ensure a reasonable accommodation can be made. The City Clerk can be reached by telephone at (715) 346-1569, TDD #346-1556, or by mail at 1515 Strongs Avenue, Stevens Point, WI 54481.

Copies of ordinances, resolutions, reports and minutes of the committee meetings are on file at the office of the City Clerk for inspection during the regular business hours from 7:30 A.M. to 4:00 P.M.

Wisconsin Community Media

Helping to create an informed public with a strong sense of community.

Wisconsin needs the CAP Act (H. R. 1746).

The **Community Access Preservation Act**, H. R. 1746, would help Wisconsin communities keep local community access television stations on cable. Wisconsin needs these stations because they focus entirely on hometown coverage *and* train residents how to use video so they can use TV, too. No other media source does this. No other media outlet is operated by the community, and no other outlet provides a platform for local residents to speak.

When a state bill was passed in 2007, these stations lost funding from cable companies. The bill, 2007 Act 42, also allowed cable to move the access channels from the Basic Tier where all subscribers could see them. The state law also weakened technical requirements so many stations now have reception problems and cities can't do anything about it.

The CAP Act, authored by Rep. Tammy Baldwin (D-WI) and Steve LaTourette (R-OH) returns some powers that cities continue to have under federal law, but have been made illegal under state law. Under the CAP Act, cities could once again pass ordinances to help community TV.

The state franchise law *ended* the collection of PEG fees from cable subscribers that at least 30 cities relied on to help fund community television. **The CAP Act would allow cities to pass an ordinance to collect these fees again up to a limited amount** (2% on cable gross revenue from video sales)**.**

The CAP Act would allow PEG fees to be used for either capital or operating expenses. (This would be a change from current federal law, as under *federal law*, PEG fees can only be used for capital expenses, unless the cable company agrees fees can be used for operating)**.**

The state franchise law lacks technical requirements and does not require companies to make the channels accessible to all subscribers. **The CAP Act would require companies to carry local programming without "material degradation" and in a manner viewable by every subscriber – even the ones with just basic cable.**

The state franchise law allows cable operators to charge cities when they lay new lines to carry programming from any new station location (new city hall, new school) to the company. **The CAP Act would require operators to supply the lines free of charge.**

The state franchise law allows video providers to reject virtually all requests for additional or new local channels. **The CAP Act would allow cities to request additional channels when needed (up to a limit of three) and allow cities without a channel to start one.**

The state franchise law does not recognize that communities are in the best position to determine what is best for their own towns. By treating all communities the same, some communities are doing okay under this law, but others are suffering terribly. **The CAP Act requires the FCC to study how the one-size-fits-all state franchise laws have affected community television in individual communities.**

The CAP Act also makes sure that all video providers – cable operators and telephone companies – operate under the same rules.

If you support the work of your community television station, help it do even more for your community.
Contact your U. S. Congressman and ask him to support H.R. 1746, "the CAP Act."

Representative Sean Duffy

208 Grand Avenue, Wausau 54403-5468
Phone 715-842-5606 Fax (recommended) 715-298-9348
1208 Longworth Building, Washington DC 20515
Phone 202-298-9344

RESOLUTION IN SUPPORT OF H.R.1746
THE COMMUNITY ACCESS PRESERVATION ACT (THE CAP ACT)

A RESOLUTION OF THE CITY OF STEVENS POINT, PORTAGE COUNTY, WISCONSIN URGING CONGRESS TO SUPPORT H.R. 1746, THE COMMUNITY ACCESS PRESERVATION ACT, CO-SPONSORED BY CONGRESSWOMAN TAMMY BALWIN (D-WI) AND CONGRESSMAN STEVEN LATOURETTE (R-OH); WHICH ADDRESSES CRITICAL AND IMMEDIATE THREATS TO LOCAL EDUCATIONAL AND GOVERNMENT ACCESS CHANNELS.

WHEREAS, public, educational and government (PEG) access channels are one of the last surviving sources for local television programming across the country and PEG channels play a significant role in the City of Stevens Point, Portage County, Wisconsin; and

WHEREAS, PEG channels are a unique and valuable resource for local information and discourse for the residents of the City of Stevens Point, Portage County, Wisconsin; and

WHEREAS, PEG channels televise local government meetings, including city committee, planning commission, county and school board meetings, so that citizens are informed about the actions taken by local officials; and

WHEREAS, PEG channels are also utilized to communicate with citizens on municipal events and services and also provide advisories and preparation directions to residents for emergency purposes; and

WHEREAS, PEG channels provide a window through which residents can view the diversity of cultures, educational information, recreational activities and artistic endeavors in their local community; and

WHEREAS, PEG channels reflect the unique identity of the communities they serve; and

WHEREAS, it is important to preserve PEG channels and funding for PEG channels, and to ensure that the channels continue to be available to the entire community to serve the residents of the City of Stevens Point, Portage County, Wisconsin; and

WHEREAS, H.R. 1746, the Community Access Preservation (CAP) Act, addresses critical and immediate threats to PEG channels; and

WHEREAS, the CAP Act provides important solutions for critical and immediate threats to PEG channels and facilities across the country by removing use restrictions on PEG access fees, restoring PEG revenue streams, and preventing video providers from charging municipalities for the transmission of the PEG channels; and

WHEREAS, the CAP Act would allow PEG fees to once again be used for any legitimate PEG expense, instead of restricting PEG fees to capital expenses only,

NOW, THEREFORE, BE IT RESOLVED by the City of Stevens Point, Portage County, Wisconsin:

Section 1: That the Common Council of the City of Stevens Point, Portage County, Wisconsin urges Senators Kohl and Johnson and Congressman Duffy to take all actions in support of the immediate passage of H.R. 1746, including, but not limited to endorsing, co-sponsoring and voting for H.R. 1746.

Section 2: That a copy of this resolution be provided to Senators Kohl and Johnson and Congressman Duffy.

PASSED AND ADOPTED by the City of Stevens Point, Portage County, Wisconsin.

[DATE]

ADOPTED _____ _____
Mayor

APPROVED _____ _____
Clerk

ORDINANCE
Revised Municipal Code
of the City of Stevens Point, Wisconsin

Adopting Wis. Stats. 349.21(1) – Authority to regulate school bus warning lights.

The Common Council for the City of Stevens Point, Portage County, Wisconsin does ordain as follows:

Section I. Section 9.01(a) of the Revised Municipal Code of the City of Stevens Point is hereby created to read as follows:

That Section 349.21(1) of the Wisconsin Statutes is hereby adopted.*

Section II. This ordinance shall take effect upon passage and publication according to law.

Approved: _____
Andrew J. Halverson, Mayor

Attest: _____
John V. Moe, Clerk

Dated _____

Passed _____

Published _____

RESOLUTION

[5348 HIGHWAY 10 E]

BE IT RESOLVED by the Common Council of the City of Stevens Point, Portage County, Wisconsin, that based upon the application and after reviewing the Plan Commission record and hearing the testimony of interested parties, the Common Council determines that all conditions required have been met, the property located at **5348 Highway 10 E (Parcel ID 2408-35-2100-22)**, LOT 2 CSM#6995-25-218 BNG PART NE NW;SUBJ TO & JNT ACC AGRMT DES 740846 S35 T24 R8 536/124 562/635 551/818 483/991 569416 570853 Stevens Point, Portage County, Wisconsin, is hereby granted a Conditional Use Permit for the purposes of installing three new antennas to an existing tower and performing line work, as shown on the attached plans. The Conditional Use Permit is subject to the following conditions:

1. All other structural components shall be installed within the current footprint of the facility.

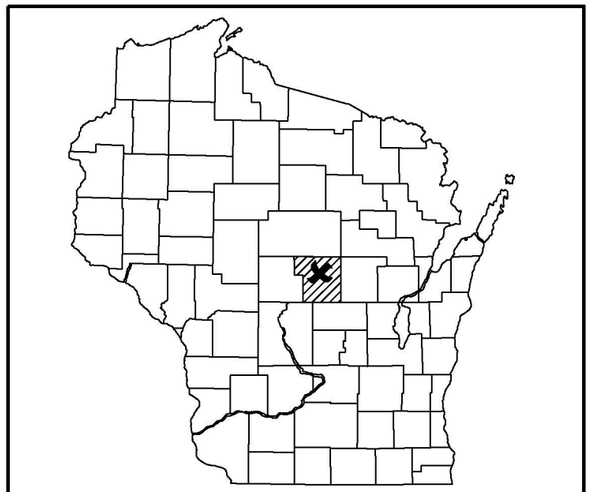
Such approval constitutes a Conditional Use under the City's ordinances.

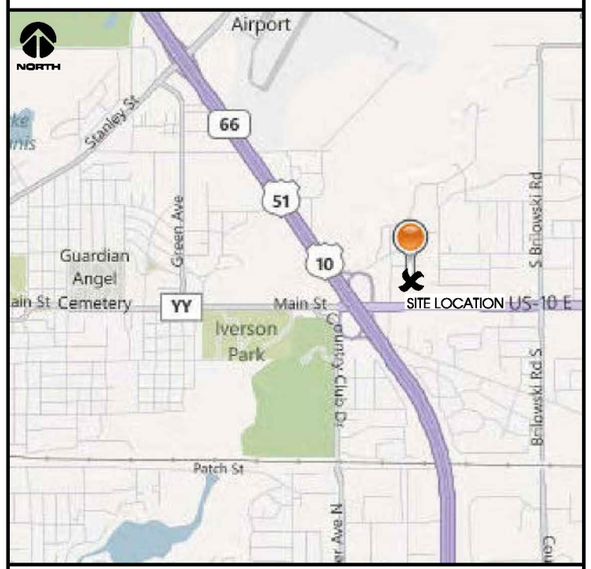
Approved: _____
Andrew J. Halverson, Mayor

Attest: _____
John Moe, City Clerk

Dated: March 19, 2012
Adopted: March 19, 2012

Drafted by: Michael Ostrowski
Return to: City Clerk





SITE LOCATION MAPS

FROM MADISON AREA:

Take I-39 West/I-90West/I-94 North (go 28.8 mi)
Take exit 108B for I-39 North toward Portage/Wausau (go 73.8 mi)
Take exit 158A for US-10 East toward Appleton/Waupaca (go 0.2 mi)
Turn RIGHT on US-10 East (go 0.2 mi)

TRIP DISTANCE:
109.7 miles, Time: 1 hours, 39 mins

DISTANCE TO NEAREST INTERSECTION:
US-10 East & Maple Bluff Rd; approx. 750' southwest of site

DRIVING DIRECTIONS

STEVENS POINT EAST [#774425]
STEVENS POINT, WISCONSIN
LTE DRAWINGS
130' MONOPOLE
JANUARY 2012

SHEET INDEX:

NO.:	PAGE TITLE:
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C-2	COMPOUND PLAN
A-1	TOWER ELEVATION
A-2	ANTENNA INSTALLATION DETAILS
A-3	COAX ROUTING DETAILS
G-1	ANTENNA & GROUNDING NOTES

ANTENNA INVENTORY & STRUCTURAL NOTE

LTE TOWER INVENTORY: COMPLETED BY RAMAKER & ASSOCIATES, INC.
REPORT #: 19328
DATED: 01/24/2011

LTE STRUCTURAL ANALYSIS: COMPLETED BY RAMAKER & ASSOCIATES, INC.
REPORT #: 19328
DATED: 03/22/2011
CONCLUSION: STRUCTURALLY ADEQUATE

LTE ADDITION SCOPE

TDMA ANTENNAS:	DO NOT EXIST.
EXIST. COAX PORT:	CAN ACCOMMODATE ADDITION OF (6) 7/8" COAX.
EXIST. EXTERIOR G.B.:	NEW GROUND BAR TO REPLACE EXISTING.
EXIST. ICE BRIDGE:	CAN ACCOMMODATE ADDITION OF (6) 1 5/8" COAX.
EXIST. LOWER AGB:	CAN ACCOMMODATE ADDITION OF (6) GROUND KITS.
EXIST. ANTENNA FRAME:	NEW UPPER SUPPORT RAIL KIT CUT TO APPROPRIATE SIZE REQUIRED.
EXIST. UPPER AGB:	CAN ACCOMMODATE ADDITION OF (6) GROUND KITS.

PROJECT DIRECTORY:

ENGINEERING COMPANY:
EDGE CONSULTING ENGINEERS, INC.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
CONTACT: ANDREW BRADLEY
PHONE: 608.644.1449

CLIENT:
U.S. CELLULAR - MADISON
5117 WEST TERRACE DRIVE
MADISON, WI 53718
CONTACT: BRANDI VANDENBERG
PHONE: 402.515.8275

FIBER OPTIC PROVIDER:
CHARTER COMMUNICATIONS
15100 TRINITY BLVD, SUITE 500
FORT WORTH, TX 76155
CONTACT: ANDY TURNER (CB FIBER PROJECT MANAGER)
PHONE: 817.298.3553
CELL: 817.455.2129
EMAIL: andy.turner@chartercom.com

PREVIOUS SURVEYOR:
AERO-METRIC (COMPLETED FOR U.S.C.C.)
4020 TECHNOLOGY PARKWAY
P.O. BOX 449
SHEBOYGAN, WI 53082-0449
CONTACT: BRAD BUECHEL
PHONE: 920.457.8194

PROJECT INFO:

SITE LOCATION:
5548 WALTER STREET
STEVENS POINT, WI 54481

SITE #: 774425

FCC #: 1258966

PROPERTY OWNER:
CLARENCE TRZEBIATOWSKI
5548 WALTER STREET
STEVENS POINT, WI 54481

TOWER OWNER:
U.S. CELLULAR
8410 W. BRYN MAWR AVE., SUITE 700
CHICAGO, IL 60631

2C INFORMATION (NAD 1983/91)
-CENTER OF LEASE PARCEL-
LAT: 44°-31'-30.06"
LONG: 89°-31'-18.83"
GROUND ELEVATION (NGVD 29): 1098.5'

PLSS INFORMATION:
PART OF NE1/4 OF THE NW1/4,
SECTION 35, T.24N., R.8E.,
TOWN OF STEVENS POINT,
PORTAGE COUNTY
WISCONSIN

TAX NUMBER: 2408-35-2100-22

UTILITY INFORMATION

FIBER OPTIC SERVICE PROVIDER: CHARTER COMMUNICATIONS

PRELIMINARY FIBER WALK DATE: 12/15/2011

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN, CALL DIGGER'S HOTLINE

TOLL FREE
1-800-242-8511
FAX A LOCATE 1-800-338-3860

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

ENGINEER SEAL:

PRELIMINARY - NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.

Signature: _____

Date: _____

Edge Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

SHEET TITLE:
TITLE SHEET
STEVENS POINT EAST [#774425]
STEVENS POINT, WISCONSIN

ISSUE DATE:
PRELIMINARY LTE - 12/22/2011

REVISIONS:
COAX REVISIONS - 01/25/2012

DRAWN BY: DGS, BL
CHECKED BY: ABB
PLOT DATE: 1/25/2012
PROJECT #: 6469
FILE NAME: T-1.dgn

SHEET NUMBER:
T-1

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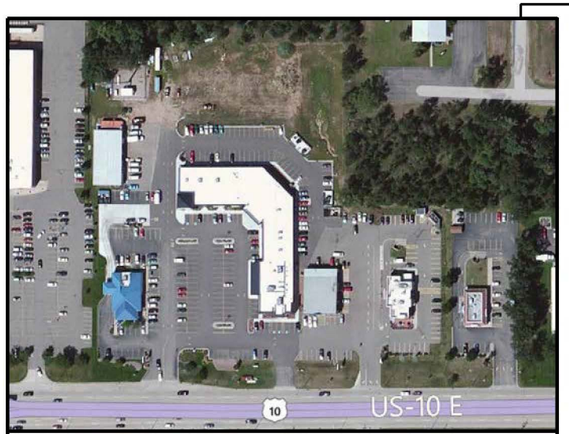
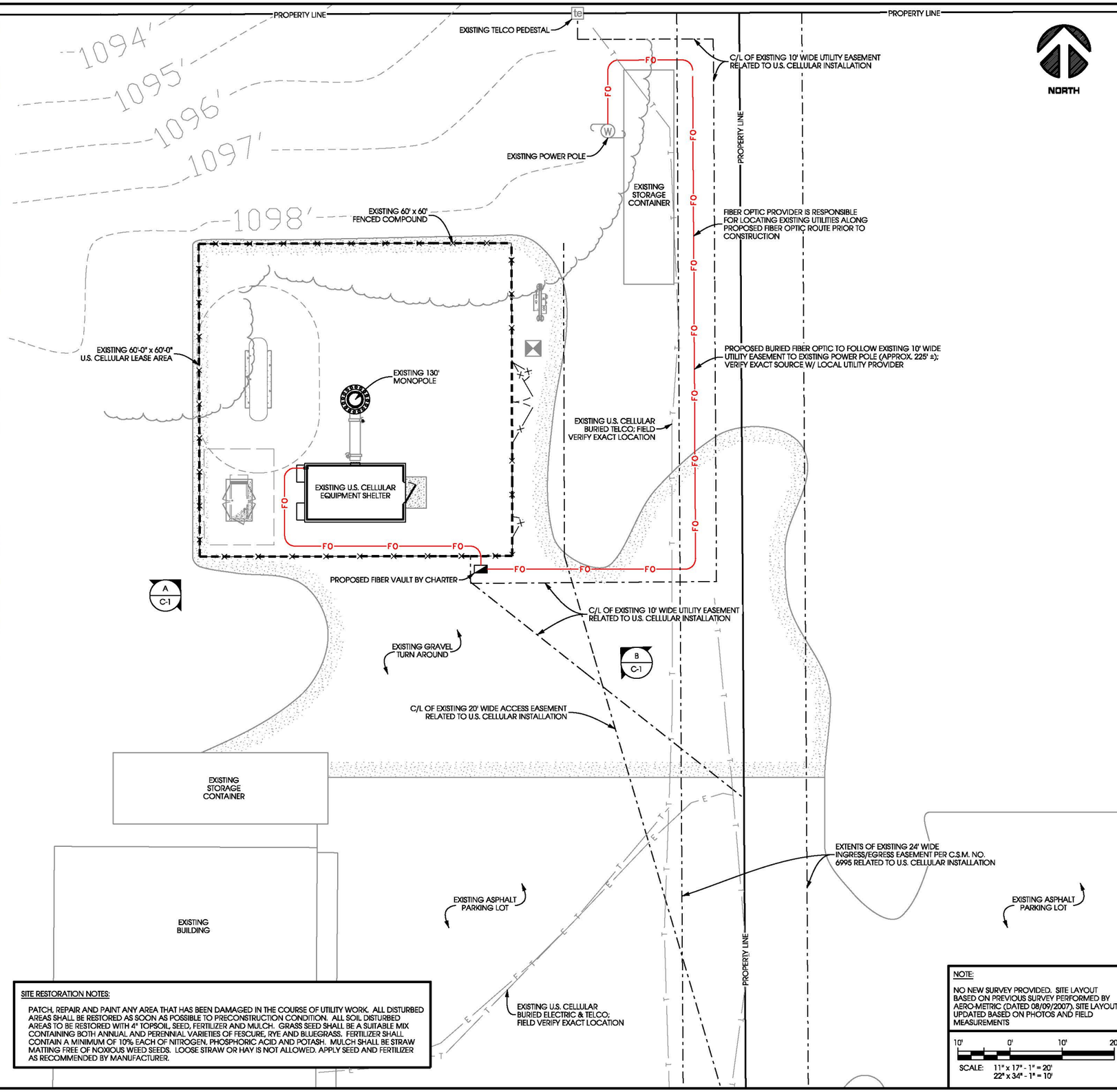


BIRD'S EYE AERIAL OVERVIEW

A C-1 **SITE OVERVIEW [LOOKING NORTHEAST]**

B C-1 **SITE OVERVIEW [LOOKING NORTHWEST]**



SITE RESTORATION NOTES:

PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF UTILITY WORK. ALL DISTURBED AREAS SHALL BE RESTORED AS SOON AS POSSIBLE TO PRECONSTRUCTION CONDITION. ALL SOIL DISTURBED AREAS TO BE RESTORED WITH 4" TOPSOIL, SEED, FERTILIZER AND MULCH. GRASS SEED SHALL BE A SUITABLE MIX CONTAINING BOTH ANNUAL AND PERENNIAL VARIETIES OF FESCURE, RYE AND BLUEGRASS. FERTILIZER SHALL CONTAIN A MINIMUM OF 10% EACH OF NITROGEN, PHOSPHORIC ACID AND POTASH. MULCH SHALL BE STRAW MATTING FREE OF NOXIOUS WEED SEEDS. LOOSE STRAW OR HAY IS NOT ALLOWED. APPLY SEED AND FERTILIZER AS RECOMMENDED BY MANUFACTURER.

NOTE:

NO NEW SURVEY PROVIDED. SITE LAYOUT BASED ON PREVIOUS SURVEY PERFORMED BY AERO-METRIC (DATED 08/09/2007). SITE LAYOUT UPDATED BASED ON PHOTOS AND FIELD MEASUREMENTS

10' 0' 10' 20'

SCALE: 11" x 17" - 1" = 20'
22" x 34" - 1" = 10'

Edge Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

SHEET TITLE:

SITE PLAN
STEVENS POINT EAST [#774425]
STEVENS POINT, WISCONSIN

ISSUE DATE:	PRELIMINARY LTE - 12/22/2011
REVISIONS:	COAX REVISIONS - 01/25/2012
DRAWN BY:	DGS, BL
CHECKED BY:	ABB
PLOT DATE:	1/25/2012
PROJECT #:	6469
FILE NAME:	C-1.dgn
SHEET NUMBER:	C-1

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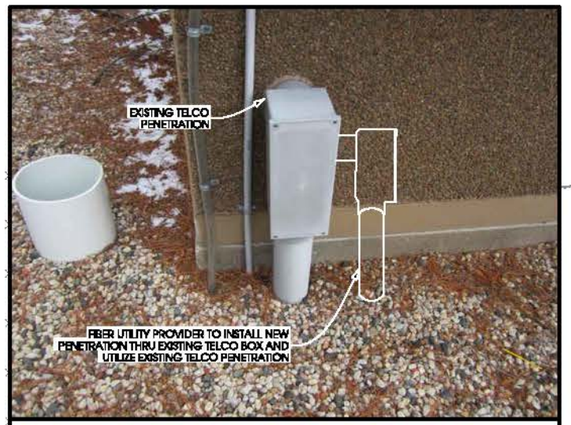
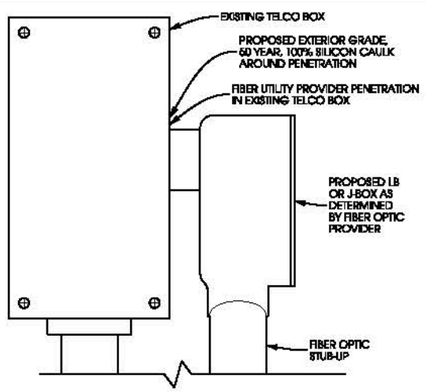
A C-2 **PROPOSED FIBER PENETRATION (SHELTER INTERIOR)**

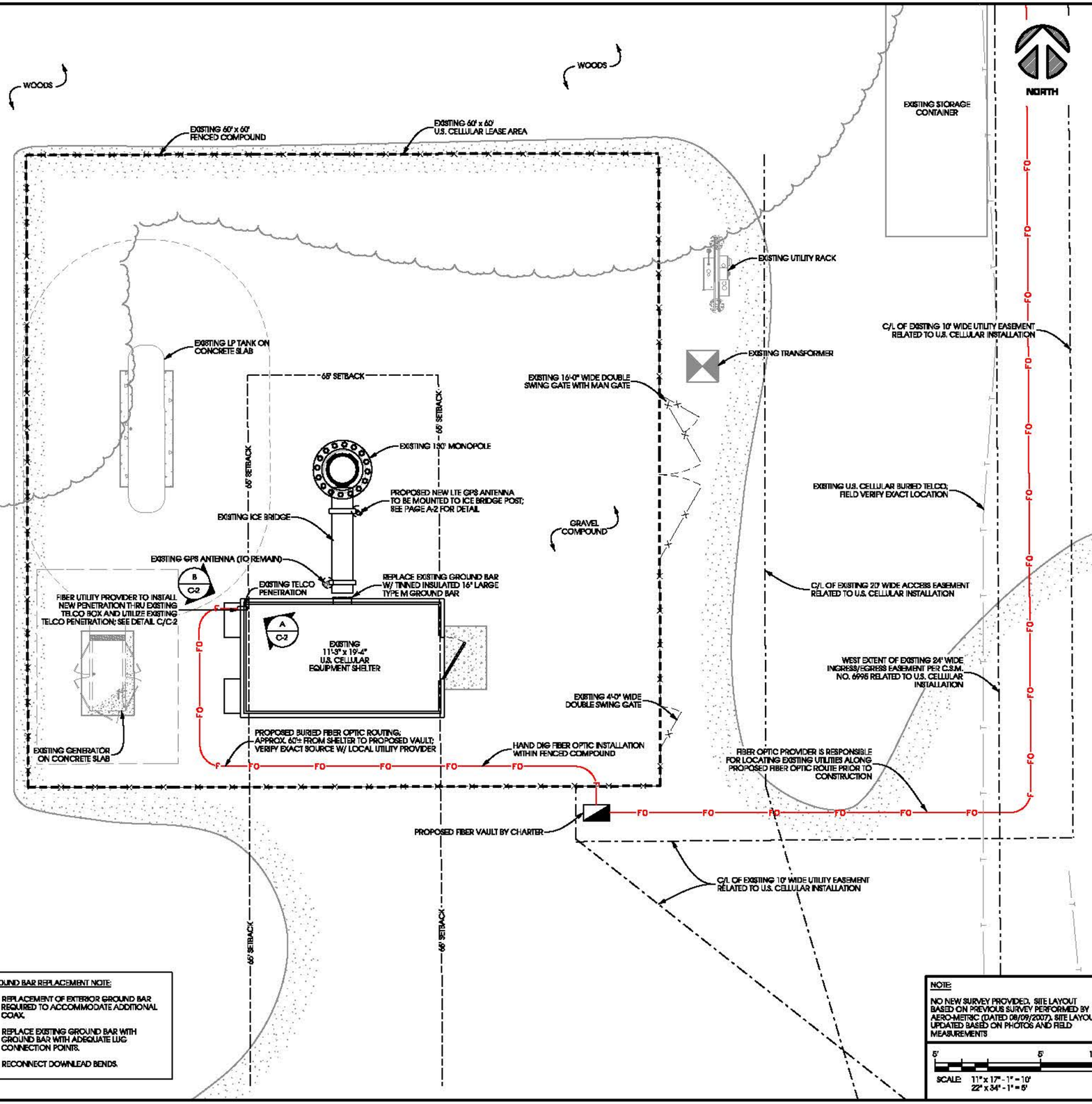


B C-2 **PROPOSED FIBER PENETRATION (SHELTER EXTERIOR)**



C C-2 **PROPOSED TELCO BOX PENETRATION DETAIL**

SCALE: NTS



GROUND BAR REPLACEMENT NOTE:

- REPLACEMENT OF EXTERIOR GROUND BAR REQUIRED TO ACCOMMODATE ADDITIONAL COAX.
- REPLACE EXISTING GROUND BAR WITH GROUND BAR WITH ADEQUATE LUG CONNECTION POINTS.
- RECONNECT DOWNLEAD BENDS.

NOTE:

NO NEW SURVEY PROVIDED. SITE LAYOUT BASED ON PREVIOUS SURVEY PERFORMED BY AERO-METRIC (DATED 08/09/2007). SITE LAYOUT UPDATED BASED ON PHOTOS AND FIELD MEASUREMENTS

5' 5' 10'

SCALE: 11" x 17" - 1" = 10'
22" x 34" - 1" = 5'

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COMPOUND PLAN
STEVENS POINT EAST [#774425]
STEVENS POINT, WISCONSIN

SHEET TITLE

ISSUE DATE:	
PRELIMINARY LTE - 12/22/2011	
REVISIONS:	
COAX REVISIONS - 01/26/2012	
DRAWN BY:	DGB, BL
CHECKED BY:	ABB
PLOT DATE:	1/25/2012
PROJECT #:	6469
FILE NAME:	C-2.dgn
SHEET NUMBER:	C-2

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LTE ADDITION NOTE:

ANTENNA LAYOUT BASED ON LTE INVENTORY - SEE PAGE T-1.

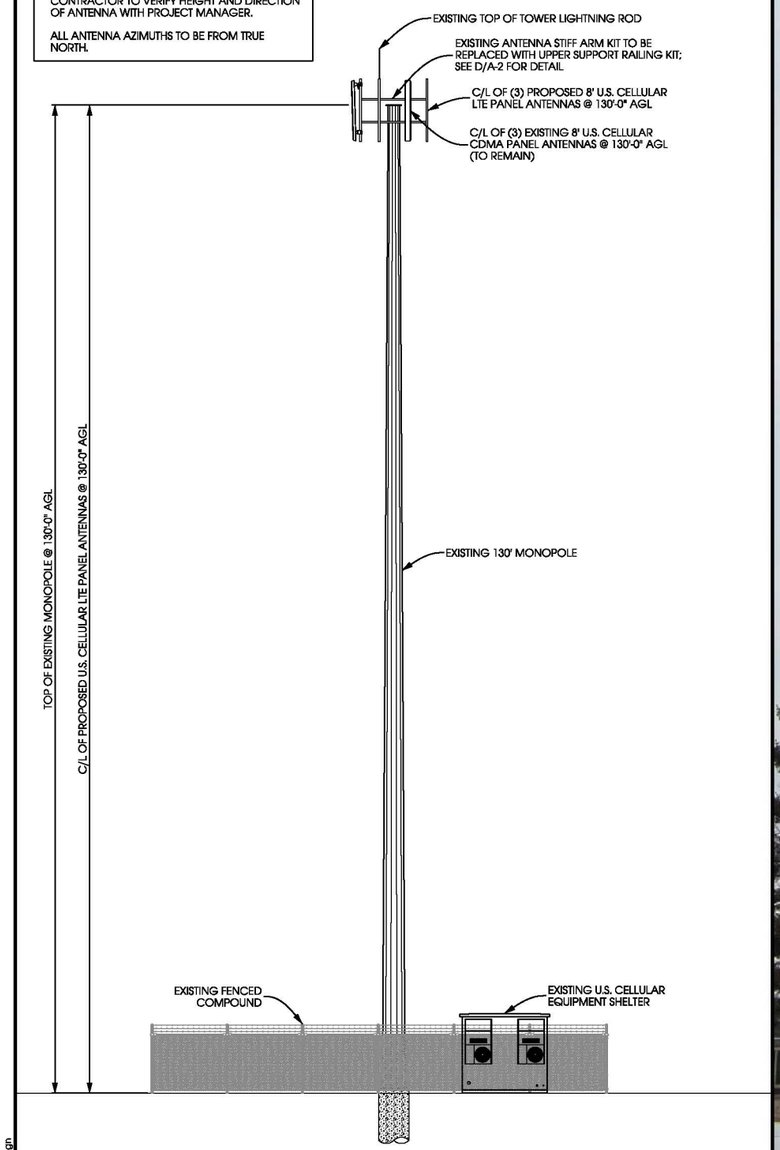
REFER TO STRUCTURAL ANALYSIS AS IDENTIFIED ON PAGE T-1. CONTRACTOR TO THOROUGHLY REVIEW THE TOWER STRUCTURAL ANALYSIS FOR INFORMATION PERTAINING TO TOWER UPGRADES, MOUNTING TYPES, ANTENNA HEIGHTS, AND COAX ROUTING. ANY DISCREPANCIES BETWEEN THE DRAWINGS, STRUCTURAL ANALYSIS, AND TOWER PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER PRIOR TO BIDDING AND INSTALLATION.

NOTES:

FOUNDATIONS SHOWN ARE TYPICAL AND DO NOT REPRESENT ACTUAL CONDITIONS.

CONTRACTOR TO VERIFY HEIGHT AND DIRECTION OF ANTENNA WITH PROJECT MANAGER.

ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH.



A / A-1 **TOWER PROFILE [WEST ELEVATION]**

SCALE: 11" x 17" - 1" = 20'-0"
22" x 34" - 1" = 10'-0"

TOWER ELEVATION - LOOKING NORTHWEST -

ANTENNA LEGEND:

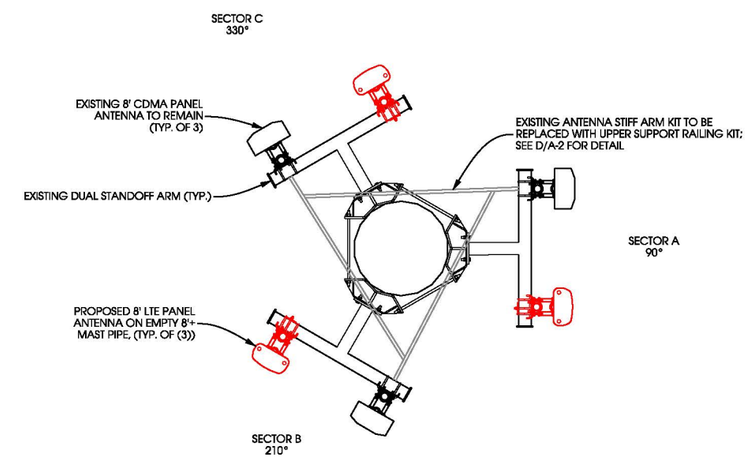
EXISTING CDMA ANTENNA TO REMAIN

PROPOSED LTE ANTENNA TO BE INSTALLED

NOTE:

ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH

NORTH



SECTOR	MAKE AND MODEL	MECHANICAL DOWNTILT	ANTENNA HEIGHT	AZIMUTH	COAX COLOR CODING	CABLE LENGTH	CABLE DIA.
A	8' LTE PANEL ANTENNA	X°	130'	90°	RED	160'	7/8"
					RED		7/8"
B	8' LTE PANEL ANTENNA	X°	130'	210°	WHITE	160'	7/8"
					WHITE		7/8"
C	8' LTE PANEL ANTENNA		130'	330°	BLUE	160'	7/8"
					BLUE		7/8"

USE CELLULAR TO VERIFY & PROVIDE RF INFORMATION

* GENERAL PLATFORM ORIENTATION BASED ON EXISTING ANTENNA AZIMUTH INFORMATION.

1ST TAPE - FOR SECTOR IDENTIFICATION:

ALPHA	(SECTOR 1)	RED
BETA	(SECTOR 2)	WHITE
GAMMA	(SECTOR 3)	BLUE

2ND TAPE - FOR TECHNOLOGY IDENTIFICATION:

CDMA	YELLOW
GSM	VIOLET
LTE	ORANGE

FREQUENCY BAND (<1" WIDE, OVER TECH. BAND):

700	GREEN
800	BROWN
1900	BLUE
2100	WHITE

USE SCOTCH VINYL TAPE 35. AVAILABLE AT GRAYBAR OR LOCAL 3M DISTRIBUTOR.

NOTES:

1. BEGIN SECTOR BAND >10" FROM CABLE TERMINATION.
2. SECTOR POSITION BANDS INDICATE LINE 1, LINE 2, ETC. REPEAT FOR EACH UNIQUE TECHNOLOGY.
3. IF ANTENNA IS DUPLEXED, BOTH TECHNOLOGY BANDS SHOULD BE USED.

B / A-1 **ANTENNA PLATFORM ASSIGNMENT**

SCALE: NTS

Edge Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

TOWER ELEVATION
STEVENS POINT EAST [#774425]
STEVENS POINT, WISCONSIN

SHEET TITLE:

ISSUE DATE:
PRELIMINARY LTE - 12/22/2011

REVISIONS:
COAX REVISIONS - 01/25/2012

DRAWN BY: DGS, BL
CHECKED BY: ABB
PLOT DATE: 1/25/2012
PROJECT #: 6469
FILE NAME: A-1.dgn

SHEET NUMBER: **A-1**

I:\6469\6469\CAD\Prof\LTE\A-1.dgn

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NOTE:

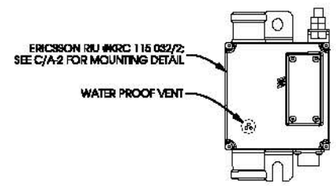
DO NOT COVER THE WATER-PROOF VENT VALVE; THE UNIT IS VENTILATED THROUGH WATER-PROOF VENT VALVE. IT IS IMPORTANT THAT THE VALVE IS NOT SILTED UP.

THE RIU CAN BE PAINTED AS LONG AS THE WATER-PROOF VENT VALVE IS NOT CLOGGED AND THE CONNECTORS ARE NOT PAINTED.

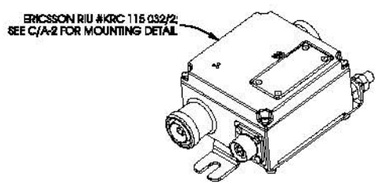
MOUNT THE RIU IN AN UPRIGHT VERTICAL POSITION WITH RET- CONNECTOR POINTING DOWNWARDS.

APPROX. DIMENSIONS: 5.5" x 3.5" x 2.5"

APPROX. WEIGHT: 1.7 LBS



ELEVATION VIEW



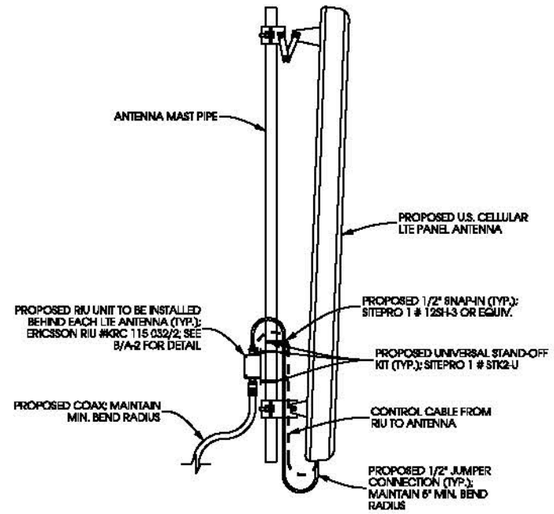
ISOMETRIC VIEW

A / A-2 **RIU DETAIL**

SCALE: NTS

NOTE:

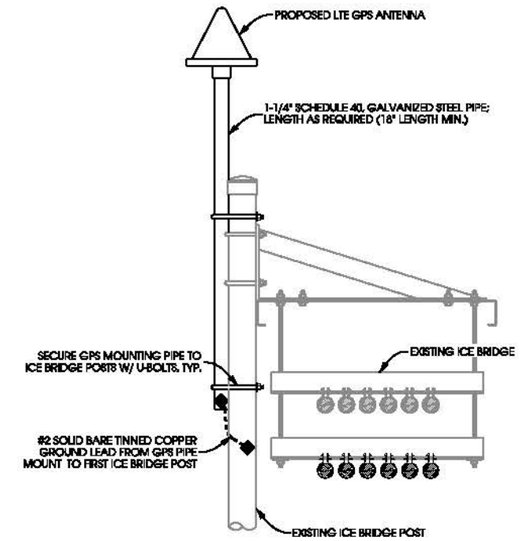
THIS DETAIL SHOWN FOR SCHEMATIC PURPOSES ONLY; SEE PAGE A-1 FOR PLATFORM LAYOUT.



TYP. EACH SECTOR

B / A-2 **RIU MOUNT DETAIL**

SCALE: NTS



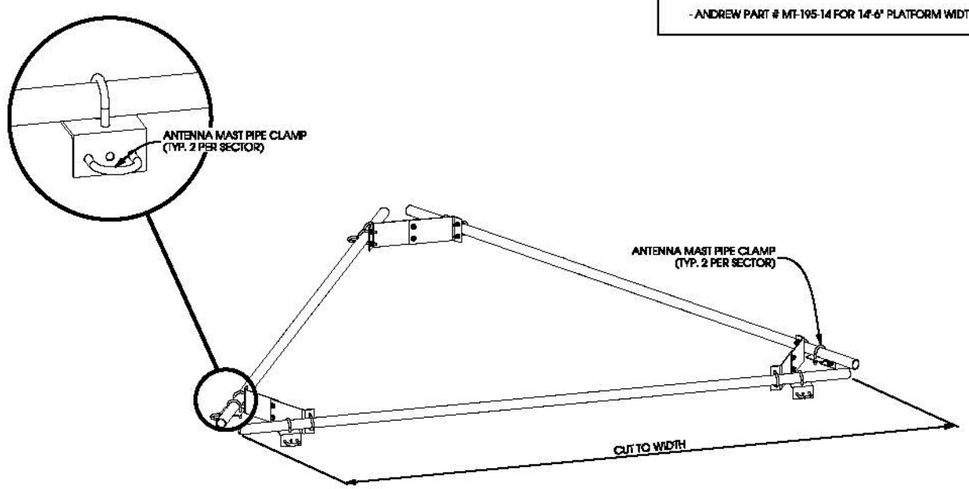
C / A-2 **GPS MOUNT DETAILS**

SCALE: NTS

PRODUCT SPECIFICATIONS:

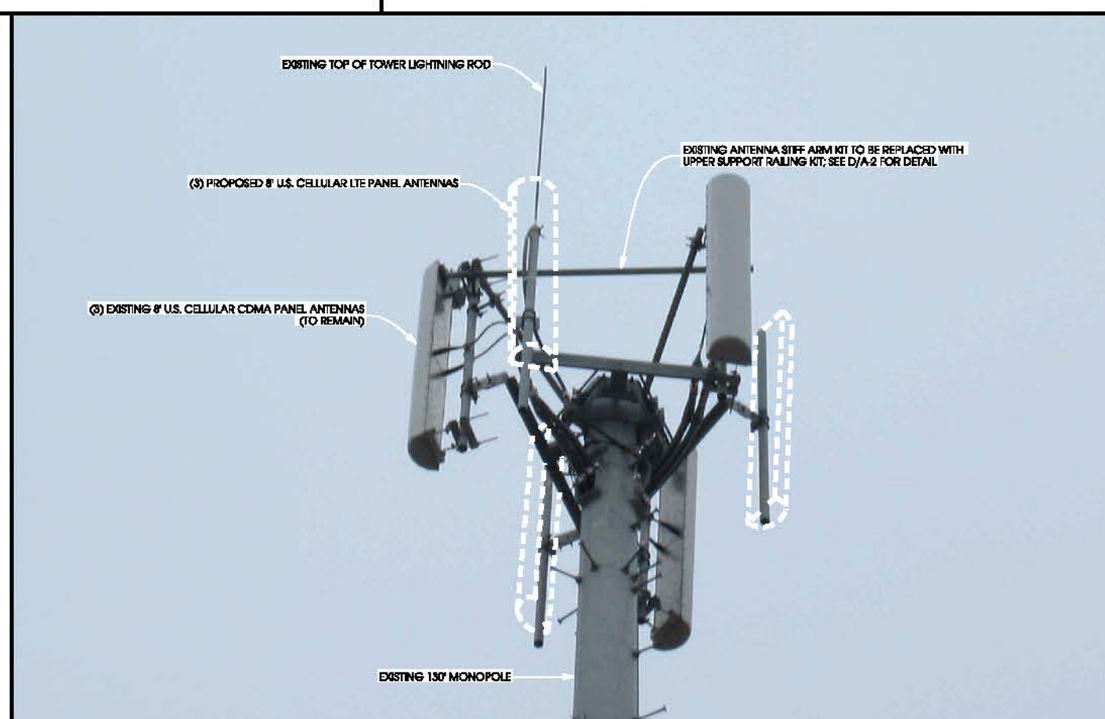
UPPER SUPPORT RAIL KIT FOR CO-LOCATION PLATFORMS:

- ANDREW PART # MT-195-12 FOR 12'-6" PLATFORM WIDTH
- ANDREW PART # MT-195-14 FOR 14'-6" PLATFORM WIDTH



D / A-2 **UPPER SUPPORT RAIL KIT**

SCALE: NTS



EXISTING U.S. CELLULAR ANTENNA PLATFORM

Edge Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
608.644.1649 fax
www.edgeconsult.com

SHEET TITLE

ANTENNA INSTALLATION DETAILS

STEVENS POINT EAST [#774425]

STEVENS POINT, WISCONSIN

ISSUE DATE:	PRELIMINARY LTE - 12/22/2011
REVISIONS:	COAX REVISIONS - 01/26/2012
DRAWN BY:	DGB, BL
CHECKED BY:	ABB
PLOT DATE:	1/25/2012
PROJECT #:	6469
FILE NAME:	A-2.dgn
SHEET NUMBER:	A-2

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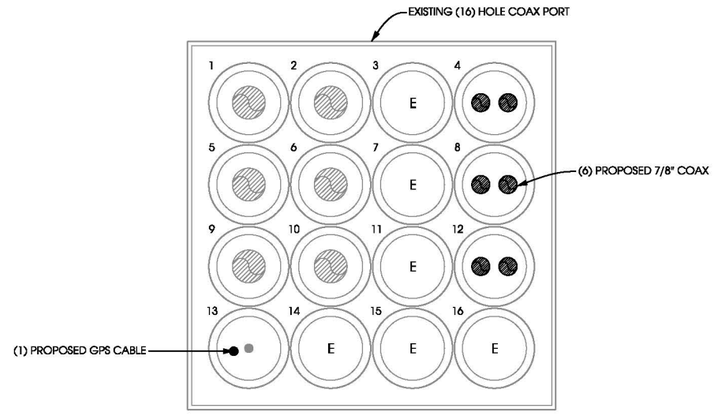
COAX LEGEND:

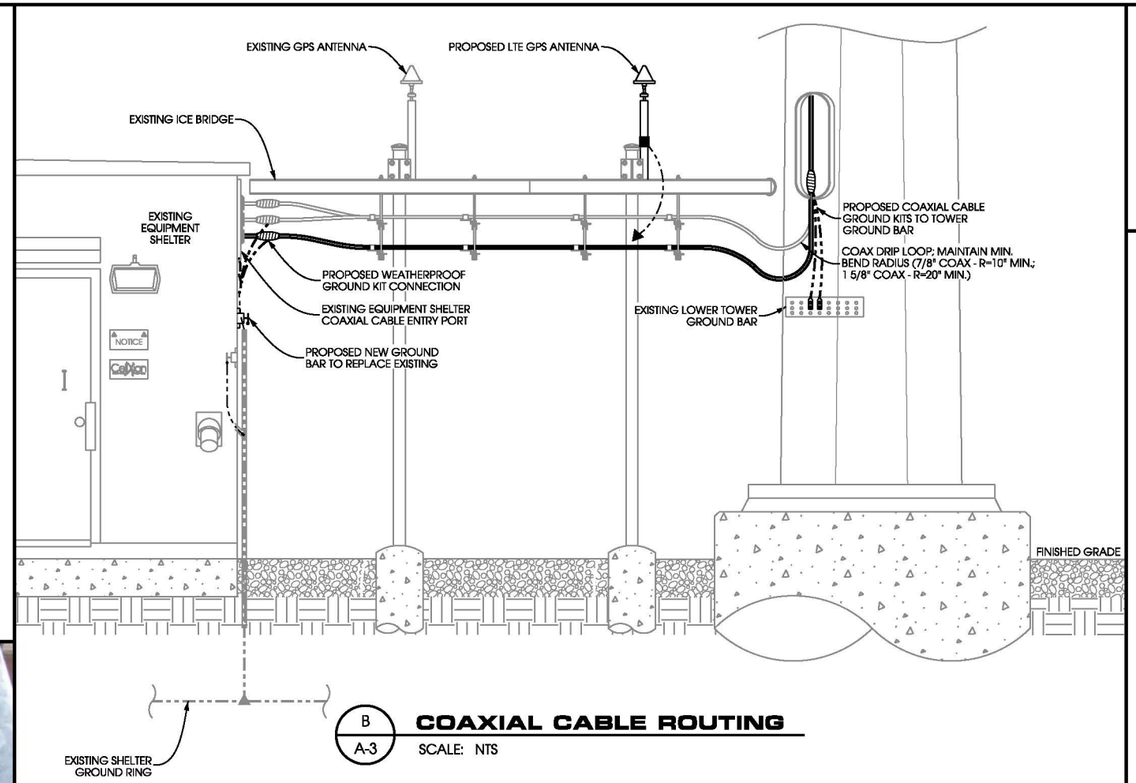
- = EXISTING 1 5/8" U.S. CELLULAR COAX (TO REMAIN)
- = PROPOSED 7/8" U.S. CELLULAR COAX
- = EXISTING GPS CABLE (TO REMAIN)
- = PROPOSED GPS CABLE
- E = OPEN COAX PORT HOLE



PORT VIEW (FROM INTERIOR)

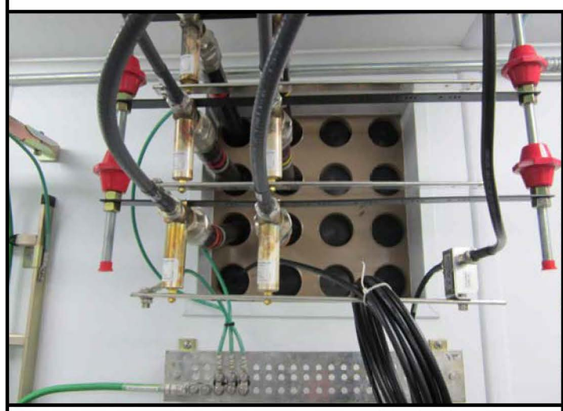
A / A-3 **COAX PORT LAYOUT - SHELTER INTERIOR**

SCALE: NTS

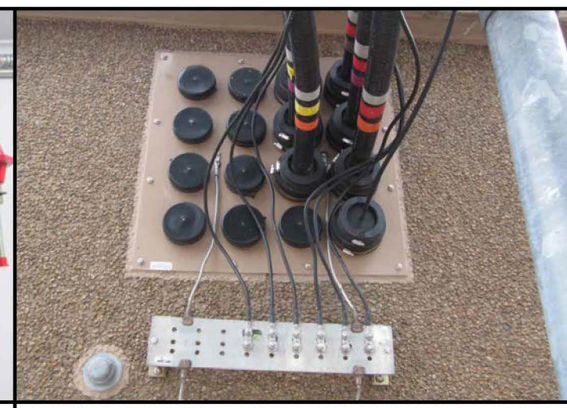


B / A-3 **COAXIAL CABLE ROUTING**

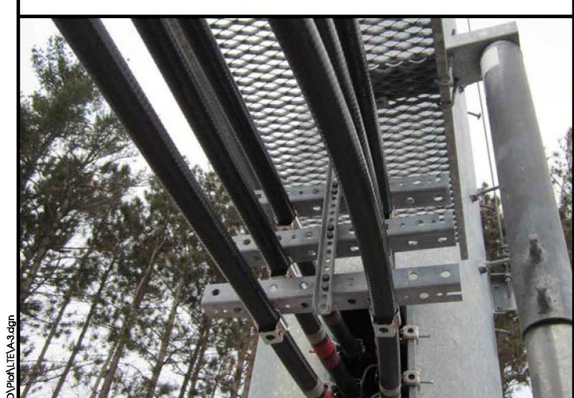
SCALE: NTS



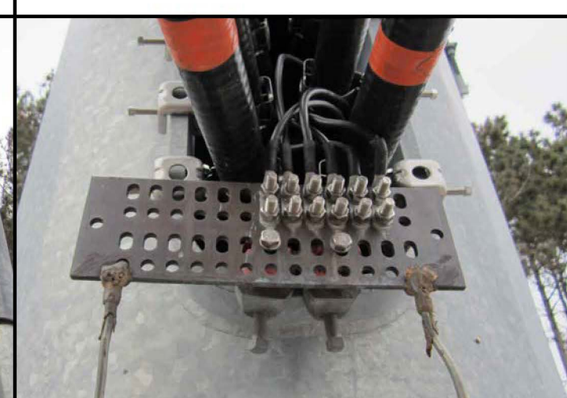
COAX PORT LAYOUT - SHELTER INTERIOR -



COAX PORT LAYOUT - SHELTER EXTERIOR-



EXISTING ICE BRIDGE TRAPEZE KITS



EXISTING LOWER TOWER GROUND BAR

EXISTING ICE BRIDGE PROFILE

Edge Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

COAX ROUTING DETAILS

STEVENS POINT EAST [#774425]

STEVENS POINT, WISCONSIN

SHEET TITLE:

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REVISIONS:	COAX REVISIONS - 01/25/2012
DRAWN BY:	DGS, BL
CHECKED BY:	ABB
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PROJECT #:	6469
FILE NAME:	A-3.dgn
SHEET NUMBER:	A-3

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ANTENNA & COAXIAL CABLE INSTALLATION

I. SCOPE:

THIS SECTION COVERS THE SPECIFICATIONS FOR ANTENNA AND COAXIAL CABLE INSTALLATION. THE AREAS OF FOCUS ARE THE INSTALLATION OF: ANTENNAS, COAXIAL, CONNECTIONS, AND ICE BRIDGE. BEND ON TOWER GROUND BAR; AND ON BUILDING GROUND BAR BEFORE ENTRY INTO WAVEGUIDE PORTS. 4" CABLE BOOTS

II. ANTENNAS:

A: ANTENNAS SHALL BE PLUMB AND INSTALLED SO THAT ENTIRE WHIP EXTENDS ABOVE VERTICAL PIPE MOUNT. DIRECTIONAL ANTENNAS SHALL BE ORIENTED TO PROPER AZIMUTH, PROVIDED ON THE RF SPECIFICATION SHEET. NOTE: THE ANTENNA MAY BE ORIENTED USING THE REFLECTOR AS THE REFERENCE. ADJUSTING ITS AZIMUTH 180 DEGREES FROM MAXIMUM ANTENNA RADIATION.

B: MICROWAVE ANTENNAS (DISHES) SHALL BE ASSEMBLED PER MANUFACTURER'S DRAWINGS. STIFF ARMS AND RADOMES SHALL BE INSTALLED WITH POLARIZATION PROVIDED BY RF SPECIFICATION SHEET. IF PATH IS NOT READY TO ALIGN, DISH SHOULD BE POINTED TOWARD CALCULATED AZIMUTH, OR DIRECTION OF FIELD STAKE DENOTING OPPOSITE END. TWO STIFF ARMS SHALL BE PROVIDED FOR MICROWAVE DISHES 6'-0" IN DIAMETER AND GREATER.

C: A TRANSIT SHALL BE USED TO PROPERLY ALIGN CELLULAR AND MICROWAVE ANTENNAS.

III. COAXIAL CABLE:

A: COAXIAL CABLE SHALL BE SUPPORTED WITH SNAP IN HANGERS. SNAP IN HANGERS SHOULD BE USED EVERY 3 FEET THE ENTIRE HEIGHT OF TOWER. ANGLE ADAPTERS OR ROUND MEMBER ADAPTERS WITH BUTTERFLY CLAMPS SHALL BE USED ELSEWHERE, I.E. SIDEARMS, PLATFORMS, AND MICROWAVE MOUNTS.

B: COAXIAL CABLE SHALL ALSO BE SUPPORTED WITH HOISTING GRIPS, INSTALLED AT MAXIMUM INTERVALS OF 200 FEET. HOISTING GRIPS SHALL BE ATTACHED WITH SHACKLES, BOLTED IN THE 7/16" HOLE OF WAVEGUIDE LADDER.

C: ALL JUMPERS USED BETWEEN COAXIAL CABLE AND ANTENNA SHALL BE SUPPORTED WITHIN 18 INCHES OF ANTENNA, USING BUTTERFLY CLAMPS WITH ANGLE ADAPTERS OR ROUND MEMBER ADAPTERS AROUND PIPES. CELLULAR ANTENNAS TYPICALLY USE 6' JUMPERS; MICROWAVE DISHES USE 3' JUMPERS.

D: COAXIAL CABLE SHALL BE NEATLY BENT WHEN REQUIRED, USING A MINIMUM BENDING RADIUS OF 10 TIMES THE DIAMETER OF THE COAXIAL CABLE. DRIP LOOPS SHOULD BEGIN AT THE ICE BRIDGE. THE BEND IN THE COAXIAL CABLE SHOULD BE AT A LOWER HEIGHT THAN THE ENTRY PORT.

E: COAXIAL CABLE SHALL BE SUPPORTED WITH SNAP IN HANGERS ON THE WAVEGUIDE LADDER UNDER ICE BRIDGE. COAXIAL CABLE SHOULD BE NEATLY CUT 16" INSIDE BUILDING AND TERMINATED AT THE QUARTER WAVE SHORTS.

F: CONNECTORS WILL NORMALLY BE PROVIDED FIRST OFF REEL FROM FACTORY. CONNECTORS TERMINATED IN BUILDING SHALL BE NEATLY INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

G: OPENINGS #1, #2, AND #3 SHOULD BE USED FOR THE X SECTOR; OPENINGS #5, #6, AND #7 SHOULD BE USED FOR THE Y SECTOR; OPENINGS #9, #10, AND #11 SHOULD BE USED FOR THE Z SECTOR. OPENINGS #4, #8, AND #12 SHOULD BE RESERVED FOR MICROWAVE WAVEGUIDE.

H: COAXIAL CABLES SHOULD BE LABELED WITH TAGS INSIDE THE BUILDING.

SECTOR INDICATOR - PRIMARY COLORS
USE 2" WIDE COLORED TAPE TO INDICATE SECTORS
X SECTOR FOR SECTORED SITE: BROWN
Y SECTOR FOR SECTORED SITE: VIOLETZ SECTOR FOR SECTORED SITE: ORANGEFUNCTION INDICATOR - SECONDARY COLORS
USE 1" WIDE COLORED TAPE TO INDICATE FUNCTION.
RX1: YELLOW RX2: GREEN TX1: RED TX2: WHITE TX3: BLUE

I: ALL EXCEPTIONS NEED TO BE VERIFIED WITH THE PROJECT MANAGER.

IV. CONNECTORS:

A: ALL CONNECTIONS, AND GROUNDING KITS SHALL BE WEATHER PROOFED USING COLD SHRINK OR ANDREW APPROVED WEATHER STRIPPING.
NOTE: NO PORTION OF CONNECTOR SHALL BE EXPOSED TO THE ELEMENTS.

B: COAXIAL CABLE SHALL BE GROUNDED USING GROUNDING KITS AT THE TOP, BELOW THE BEND; BOTTOM, ABOVE THE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

C: GROUNDING KITS SHALL BE NEATLY INSTALLED SO THAT THE JUMPER RUNS IN THE SAME DIRECTION AS THE COAXIAL AND GROUND BAR. JUMPER WIRE SHOULD RUN IN A DIRECT PATH TO THE GROUND BAR/TOWER LADDER, BUT HAVE ADEQUATE SLACK FOR EXPANSION, CONTRACTION, AND REPAIR. NON-OXID GREASE SHOULD BE APPLIED BETWEEN LUG AND BAR/TOWER.

D: TOWER GROUND BAR SHALL BE INSTALLED ON THE ANGLE BEHIND THE FIRST DIAGONAL WAVEGUIDE LADDER RUNG, ABOVE 8'6".

V. ICE BRIDGE:

A: ICE BRIDGE SHALL BE ATTACHED AT ONE END WITH BOLTS, TO THE ANGLE ON THE BUILDING, ABOVE THE WAVEGUIDE PORTS. SINCE THE ANGLE (78") IS TYPICALLY WIDER THAN THE ICE BRIDGE (24"), THE BRIDGE SHOULD BE CENTERED SO THAT IS COVERS THE WAVEGUIDE PORT ENTRY WHICH IS 24" WIDE. THE OPPOSITE END OF BRIDGE SHOULD BE 6" FROM TOWER FACE. IF FIELD CUT, IT SHOULD BE FILED SMOOTH AND COLD GALVANIZED.

B: IF BRIDGE IS SUPPORTED BY VERTICAL PIPES, THEY SHOULD BE CUT EVENLY AND CAPPED, APPROXIMATELY 18" ABOVE ICE BRIDGE.

C: 2 TIER WAVEGUIDE LADDER SHALL BE INSTALLED UNDER ICE BRIDGE PROPERLY SUPPORTED PER TOWER MANUFACTURER'S DRAWINGS.

ANTENNA INSTALLATION NOTES

GROUNDING SYSTEM NOTES

1. SCOPE:

THIS SECTION COVERS THE SPECIFICATIONS FOR CELL SITE GROUNDING. THE AREAS OF FOCUS ARE: TOWER, BUILDING, AND INSTALLATION METHODS.

2. GENERAL:

2.1 ALL GROUND RODS SHALL BE 5/8" COPPER CLAD STEEL 10 FT. LONG. GROUND RODS SHALL BE EQUALLY SPACED AT 10 FT. INTERVALS. REFER TO SITE GROUNDING PLAN FOR DETAILS AND PLACEMENT WITH GROUNDING.

2.2 GROUNDING A SYSTEM SHALL BE MEGGAR TESTED TO ASSURE SATISFYING 5 OHMS OR LESS RESISTANCE.

2.3 ALL CADWELD CONNECTIONS TO GALVANIZED MATERIAL SHALL BE PROPERLY PREPARED TO ASSURE A SATISFACTORY CADWELD. THE CADWELD CONNECTION SHALL BE COATED WITH A COLD GALVANIZING SPRAY .

2.4 CONTRACTOR SHALL PROVIDE PHOTO DOCUMENTATION OF THE GROUND SYSTEM BY PROVIDING A CD TO US CELLULAR.
REQUIRED PHOTOS SHALL INCLUDE:
* ALL BUSS BARS AND COAX GROUND CONNECTIONS.
* TOWER COUNTERPOISE.
* BUILDING COUNTERPOISE.* CONNECTIONS TO POWER, TELCO, A.C., FENCING AND ICE BRIDGE.
* CONNECTIONS TO POWER, TELCO, A.C., FENCING AND ICE BRIDGE.

2.5 CONTRACTOR SHALL PROVIDE AS-BUILT PLANS SHOWING LOCATION AND DIMENSIONS OF BELOW GRADE GROUNDING FEATURES.

3. INSTALLATION:

3.1 ALL EXTERIOR ABOVE AND BELOW GROUND CONNECTIONS SHALL BE CADWELD. NO ALUMINUM CONNECTORS SHALL BE USED UNLESS SPECIFIED OTHERWISE ON PLANS.

3.2 NO RIGHT-ANGLE CADWELD CONNECTION (OTHER THAN GROUND RODS TO GROUND RING CONNECTION) SHALL BE USED. ALL WIRE-TO-WIRE CONNECTIONS SHALL UTILIZE "Y-TYPE" CONNECTIONS.

3.3 ALL VERTICAL JUMPERS SHALL NOT BE WELDED WITHIN TWO (2) FT. OF THE GROUND ROD.

3.4 KOPR SHIELD REQUIRED FOR ALL MECHANICAL CONNECTIONS.

3.5 ALL CADWELDS FINISHED WITH COLD GALVANIZED SHIELD.

4. TOWER:

4.1 A #2 SOLID BARE COPPER WIRE SHALL BE BURIED A MINIMUM FOUR (4) FT. UNDERGROUND AND ENCIRCLE TOWER FOUNDATION TWO (2) FT. FROM THE FOUNDATION. THIS GROUNDING SYSTEM SHALL BE CONNECTED TO THE BUILDING GROUND RING IN TWO (2) PLACES USING CADWELD CONNECTIONS. SUCH CONNECTIONS SHALL BE "Y-TYPE" CADWELD CONNECTIONS.

4.2 THREE (3) #2 SOLID BARE COPPER WIRES SHALL BE RUN FROM THE TOWER GROUND RING TO THE TOWER. THESE WIRES SHALL BE CONNECTED TO THE TOWER USING A CADWELD CONNECTION. NO SHARP BENDS SHALL BE PLACED IN THESE GROUND LEADS.

4.3 GROUND SYSTEM SHALL INCLUDE THE INSTALLATION OF AN ISOLATED LIGHTNING ROD AT THE TOP OF THE TOWER ABOVE THE HIGHEST ANTENNA. A #2 INSULATED COPPER WIRE SHALL BE CONNECTED TO THE TOWER LIGHTNING ROD USING AN APPROVED MECHANICAL CONNECTOR, OR CADWELDED, TO TOWER STEEL.

5. BUILDING:

5.1 A #2 SOLID BARE COPPER WIRE SHALL BE BURIED A MINIMUM OF FOUR (4) FT. UNDERGROUND AND ENCIRCLE BUILDING FOUNDATION TWO (2) FEET FROM THE FOUNDATION. GROUND RING CORNERS SHALL BE INSTALLED WITH A MINIMUM TWO FOOT RADIUS (NO SHARP RIGHT ANGLE BENDS).

5.2 A #2 SOLID BARE COPPER WIRE SHALL BE INSTALLED FROM THE BUILDING GROUND RING AND CONNECTED TO THE COPPER BUS BAR LOCATED ON THE OUTSIDE OF BUILDING UNDER THE WAVEGUIDE PORT WITH A MINIMUM NINE (9) INCHES RADIUS. A "Y-TYPE" OR "PARALLEL-TYPE" CADWELD CONNECTION SHALL BE USED FOR ALL CONNECTIONS TO THE GROUND RING.

5.3 ONE (1) ADDITIONAL #2 SOLID BARE GROUND WIRE LEAD SHALL BE INSTALLED DIRECTLY BELOW THE ELECTRICAL SERVICE ENTRANCE PORT (GROUND LUG ON THE MAIN DISCONNECT INSIDE THE BUILDING). THIS WIRE SHALL BE CONNECTED TO THE BUILDING GROUND RING USING "Y-TYPE" CADWELD CONNECTION.

5.4 ONE (1) ADDITIONAL #2 SOLID BARE COPPER GROUND WIRE LEAD SHALL BE INSTALLED DIRECTLY BELOW EACH HVAC UNIT.

6. FENCING:

6.1 A #2 SOLID BARE COPPER GROUND WIRE SHALL BE INSTALLED FROM THE FENCE CORNER POSTS TO THE GROUND RING AND SHALL BE BURIED A MINIMUM FOUR (4) FT. UNDERGROUND. THESE RUNS SHALL INCLUDE GROUND RODS EQUALLY SPACED AT 10 FT. INTERVALS. THESE RUNS SHALL BE BROUGHT ABOVE GROUND LEVEL AND SUPPORTED ABOVE GROUND WITH TEMPORARY POSTS UNTIL PERMANENT FENCING IS INSTALLED. GROUND WIRE SHALL BE CONNECTED TO THE FENCE POSTS USING CADWELD TYPE CONNECTIONS.

7. EXISTING GROUND SYSTEMS:

7.1 CONTRACTOR SHALL PROVIDE CONNECTIONS TO ALL EXISTING GROUND SYSTEMS AT THE SITE (SCADA, TELEMETRY, ETC.).

8. COMPLIANCE:

8.1 ELECTRICAL CODE COMPLIANCE

COMPLY WITH APPLICABLE LOCAL ELECTRICAL CODES REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION, AND NEC AS APPLICABLE TO ELECTRICAL GROUNDING AND BONDING, PERTAINING TO SYSTEMS, CIRCUITS AND EQUIPMENT.

8.2 UL COMPLIANCE

COMPLY WITH APPLICABLE REQUIREMENTS OF UL467, 486A AND 869 PERTAINING TO GROUNDING AND BONDING OF SYSTEMS, CIRCUITS AND EQUIPMENT. USE GROUNDING AND BONDING PRODUCTS WHICH ARE UL-LISTED AND LABELED FOR THEIR INTENDED USAGE.

8.3 IEEE COMPLIANCE

COMPLY WITH APPLICABLE REQUIREMENTS OF RECOMMENDED INSTALLATION PRACTICES OF IEEE STANDARDS 80, 81, 141 AND 142 PERTAINING TO GROUNDING AND BONDING OF SYSTEMS, CIRCUITS AND EQUIPMENT.

GROUNDING NOTES

MASTER GROUND BAR NOTES:

THE MASTER GROUND BAR (MGB) IS THE EXTENSION OF THE BUILDING GROUNDING SYSTEM AND SERVES AS THE MAIN POINT OF BONDING WITHIN THE FACILITY. THE MGB WILL BE THE COMMON GROUND POINT WHERE ALL GROUND POINTS FOR THE FACILITY WILL CONNECT.

THE MGB SHOULD BE LOCATED SO THAT THE BONDING CONDUCTOR IS AS SHORT AND STRAIGHT AS POSSIBLE TO THE FACILITY GROUND RING.

THE MGB WILL BE LOCATED NEAREST THE PRIMARY GROUND WHILE MAINTAINING HEIGHT AND DISTANCE CLEARANCES REQUIRED BY APPLICABLE ELECTRICAL CODES.

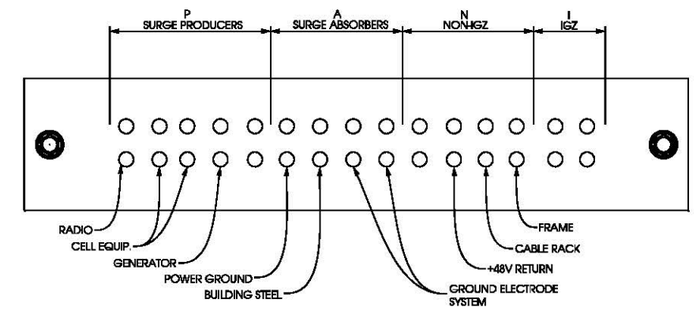
THE MGB WILL BE PREDRILLED COPPER ELECTRO TIN-PLATED BUS BAR WITH STANDARD NEMA BOLT SIZING AND SPACING WITH MINIMUM DIMENSIONS OF 1/4" THICK BY 4" WIDE AND 24" IN LENGTH. THE LENGTH MAY BE LONGER TO MEET FUTURE GROWTH PROJECTIONS.

THE MGB WILL BE INSULATED FROM ITS SUPPORT WITH MINIMUM 2" SEPARATION REQUIREMENT ON ISOLATED STANDOFFS.

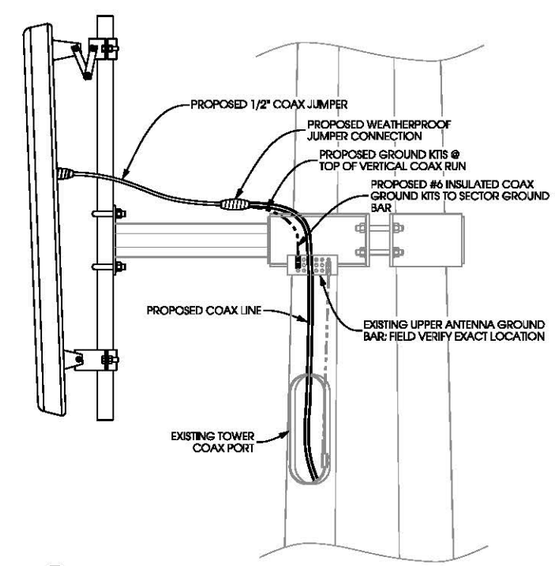
THE MGB WILL BE PERMANENTLY AND APPROPRIATELY LABELED AND IDENTIFIED WITH THE "P", "A", "N" AND "I" SECTION OF THE MGB CLEARLY AND PERMANENTLY IDENTIFIED.

P = PRODUCERS, A = ABSORBERS, N = NON-PRODUCERS, I = ISOLATED (SWITCH, DCS)

ALL CONNECTIONS MADE TO MGB WILL BE STANDARD 2-HOLE LUG.



GROUNDING NOTES



A / G-1 **ANTENNA GROUNDING DETAIL**

SCALE: NTS

Edge Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

ANTENNA & GROUNDING NOTES

STEVENS POINT EAST [#774425]

STEVENS POINT, WISCONSIN

SHEET TITLE:

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RESOLUTION

[1900 POLK STREET]

BE IT RESOLVED by the Common Council of the City of Stevens Point, Portage County, Wisconsin, that based upon the application and after reviewing the Plan Commission record and hearing the testimony of interested parties, the Common Council determines that all conditions required have been met, the property located at **1900 Polk Street (Parcel ID 2308-04-3010-02)**, THAT PRT OF THE S1/2 OF SW ¼ S4T23R8 LYG WLY OF WATER ST – ALSO VAC CLARA'S & SCRIBNER CRT & EXC 24,750 SQ FT CONVEYED TO THE CITY IN FOR ST 452/428-89 - 521/187 EXC HWY-734/52-58 743587-LSE Stevens Point, Portage County, Wisconsin, is hereby granted a Conditional Use Permit for the purposes of installing three new antennas to an existing tower and performing line work, as shown on the attached plans. The Conditional Use Permit is subject to the following conditions:

1. All other structural components shall be installed within the current footprint of the facility.

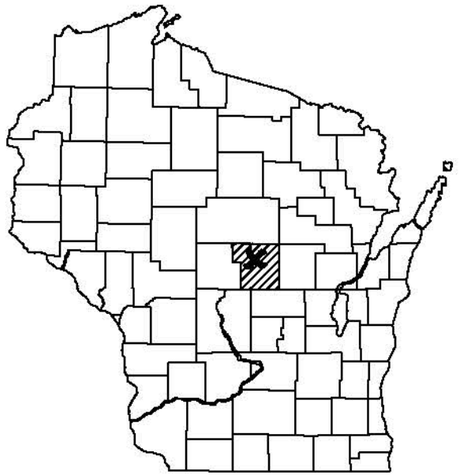
Such approval constitutes a Conditional Use under the City's ordinances.

Approved: _____
Andrew J. Halverson, Mayor

Attest: _____
John Moe, City Clerk

Dated: March 19, 2012
Adopted: March 19, 2012

Drafted by: Michael Ostrowski
Return to: City Clerk



SITE LOCATION MAPS

FROM MADISON AREA:

Take I-39 West/I-90West/I-94 North (go 28.8 mi)
Take exit 108B for I-39 North toward Portage/Wausau (go 71.9 mi)
Take exit 156 for CR-HH toward Whiting (go 0.3 mi)
Turn LEFT on McDill Ave/Cr-Hh (go 1.9 mi)
Continue on Water St/Cr-Hh (go 0.6 mi)
Turn LEFT on Polk St (fo 0.4 mi)

TRIP DISTANCE:
110.5 miles, Time: 1 hours, 46 mins

DISTANCE TO NEAREST INTERSECTION:
Polk St & Albert St; approx. 500' south of site

DRIVING DIRECTIONS

U.S. Cellular

STEVENS POINT SW [#774433]
STEVENS POINT, WISCONSIN
LTE DRAWINGS
160' MONOPOLE
FEBRUARY 2012

SHEET INDEX:

NO.:	PAGE TITLE:
T-1	TITLE SHEET
C-1	SITE PLAN
C-2	COMPOUND PLAN
A-1	TOWER ELEVATION
A-2	ANTENNA INSTALLATION DETAILS
A-3	COAX ROUTING DETAILS
G-1	ANTENNA & GROUNDING NOTES

ANTENNA INVENTORY & STRUCTURAL NOTE

LTE TOWER INVENTORY: COMPLETED BY RAMAKER & ASSOCIATES, INC.
REPORT #: 19329
DATED: 02/08/2011

LTE STRUCTURAL ANALYSIS: COMPLETED BY RAMAKER & ASSOCIATES, INC.
REPORT #: 19329
DATED: 03/22/2011

LTE ADDITION SCOPE

TDMA ANTENNAS:	DO NOT EXIST.
EXIST. COAX PORT:	CAN ACCOMMODATE ADDITION OF (6) 1 5/8" COAX.
EXIST. EXTERIOR G.B.:	NEW GROUND BAR REQUIRED.
EXIST. ICE BRIDGE:	CAN ACCOMMODATE ADDITION OF (6) 1 5/8" COAX.
EXIST. LOWER AGB:	CAN ACCOMMODATE ADDITION OF (6) GROUND KITS.
EXIST. ANTENNA FRAME:	NEW 8'-6" PIPE MOUNTS AND HARDWARE REQUIRED.
EXIST. UPPER AGB:	CAN ACCOMMODATE ADDITION OF (6) GROUND KITS.

PROJECT DIRECTORY:

ENGINEERING COMPANY:
EDGE CONSULTING ENGINEERS, INC.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
CONTACT: ANDREW BRADLEY
PHONE: 608.644.1449

CLIENT:
U.S. CELLULAR - MADISON
5117 WEST TERRACE DRIVE
MADISON, WI 53718
CONTACT: BRANDI VANDENBERG
PHONE: 402.515.8275

FIBER OPTIC PROVIDER:
CHARTER COMMUNICATIONS
15100 TRINITY BLVD, SUITE 500
FORT WORTH, TX 76155
CONTACT: ANDY TURNER (CB FIBER PROJECT MANAGER)
PHONE: 817.298.3553
CELL: 817.455.2129
EMAIL: andy.turner@chartercom.com

PREVIOUS SURVEYOR:
AERO-METRIC (COMPLETED FOR U.S.C.C.)
4020 TECHNOLOGY PARKWAY
P.O. BOX 449
SHEBOYGAN, WI 53082-0449
CONTACT: BRAD BUECHEL
PHONE: 920.457.8194

PROJECT INFO:

SITE LOCATION:
1900 POLK STREET
STEVENS POINT, WI 54481

SITE #: 774433
FCC #: 1272976

PROPERTY OWNER:
STEVENS POINT SCHOOL DISTRICT
3400 WATER STREET
STEVEN POINT, WI 54481

2C INFORMATION (NAD 1983/91)
-TOWER BASE- (PER PREVIOUS SURVEY)
LAT: 44°-29'-57.42"
LONG: 89°-34'-07.20"
GROUND ELEVATION (NGVD 29): 1082.2'

PLSS INFORMATION:
PART OF SW1/4 OF THE SW1/4,
SECTION 4, T.23N., R.8E.,
CITY OF STEVENS POINT,
PORTAGE COUNTY
WISCONSIN

PARCEL NUMBER: 281230804301002

UTILITY INFORMATION

FIBER OPTIC SERVICE PROVIDER: CHARTER

PRELIMINARY FIBER WALK DATE: 12/15/2011

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN, CALL DIGGER'S HOTLINE

TOLL FREE
1-800-242-8511
FAX A LOCATE 1-800-338-3860

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

ENGINEER SEAL:

PRELIMINARY - NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.

Signature: _____

Date: _____

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Prairie du Sac, WI 53578
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608.644.1349 fax
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TITLE SHEET
STEVENS POINT SW [#774433]
STEVENS POINT, WISCONSIN

SHEET TITLE

ISSUE DATE:	PRELIMINARY LTE - 12/28/11
REVISIONS:	AZIMUTH ADJUSTMENT - 02/02/12
DRAWN BY:	BL
CHECKED BY:	ABB
PLOT DATE:	2/2/2012
PROJECT #:	6471
FILE NAME:	T-1.dgn
SHEET NUMBER:	T-1

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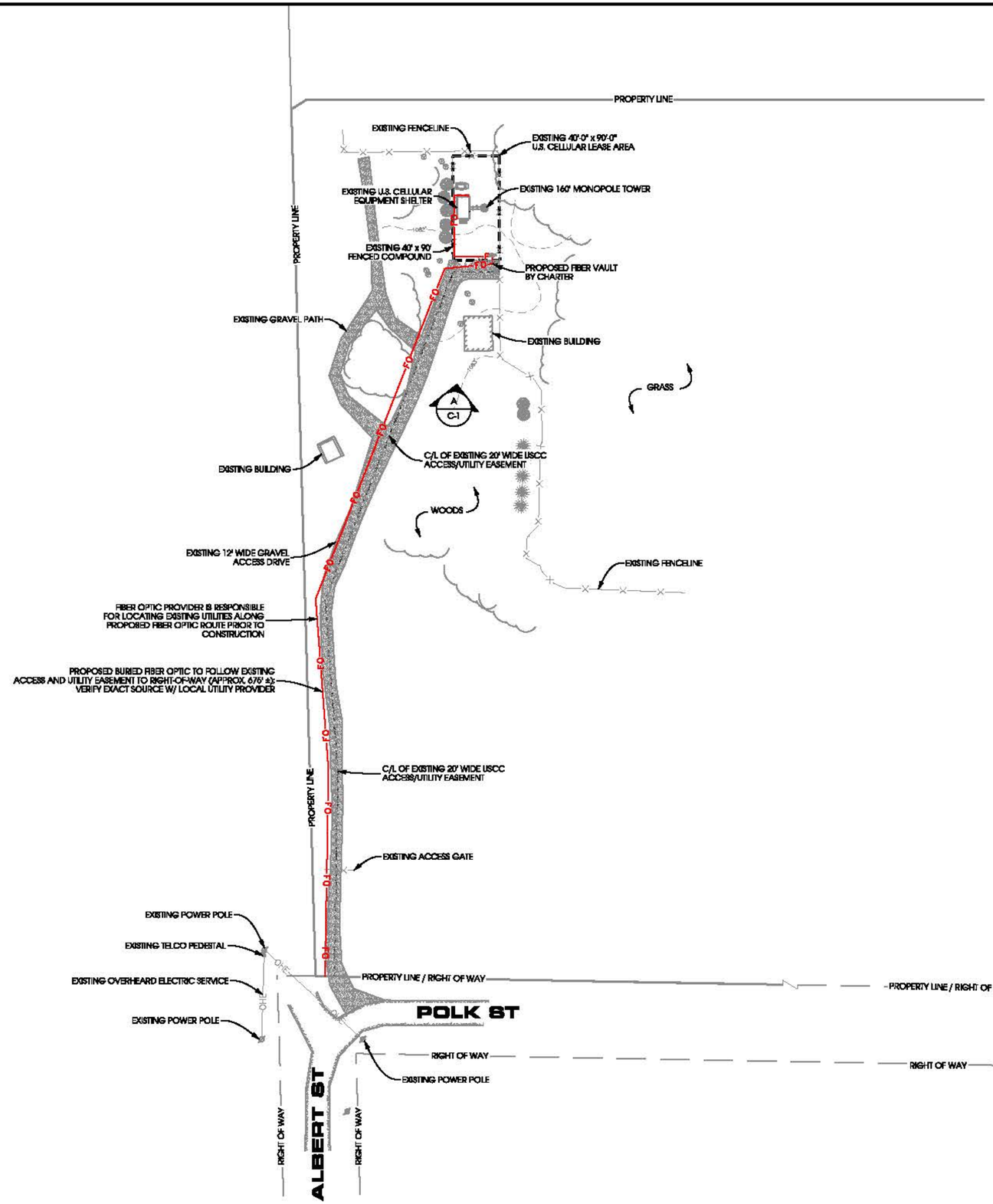
AERIAL OVERVIEW

A C-1

SITE OVERVIEW (LOOKING NORTHEAST)



SITE RESTORATION NOTES:

PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF UTILITY WORK. ALL DISTURBED AREAS SHALL BE RESTORED AS SOON AS POSSIBLE TO PRECONSTRUCTION CONDITION. ALL SOIL DISTURBED AREAS TO BE RESTORED WITH 4" TOPSOIL, SEED, FERTILIZER AND MULCH. GRASS SEED SHALL BE A SUITABLE MIX CONTAINING BOTH ANNUAL AND PERENNIAL VARIETIES OF FESCUE, RYE AND BLUEGRASS. FERTILIZER SHALL CONTAIN A MINIMUM OF 10% EACH OF NITROGEN, PHOSPHORIC ACID AND POTASH. MULCH SHALL BE STRAW MATTING FREE OF NOXIOUS WEED SEEDS. LOOSE STRAW OR HAY IS NOT ALLOWED. APPLY SEED AND FERTILIZER AS RECOMMENDED BY MANUFACTURER.

NOTE:

NO NEW SURVEY PROVIDED. SITE LAYOUT BASED ON PREVIOUS SURVEY PERFORMED BY AEROMETRIC (DATED 09/09/08).

50' 0' 50' 100'

SCALE: 11" x 17" - 1" = 100'
22" x 34" - 1" = 50'

Edge
Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
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SITE PLAN
STEVENS POINT SW [#774433]
STEVENS POINT, WISCONSIN

SHEET TITLE

ISSUE DATE:	PRELIMINARY LTE - 12/28/11
REVISIONS:	AZIMUTH ADJUSTMENT - 02/02/12
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CHECKED BY:	ABB
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PROJECT #:	6471
FILE NAME:	C-1.dgn
SHEET NUMBER:	C-1

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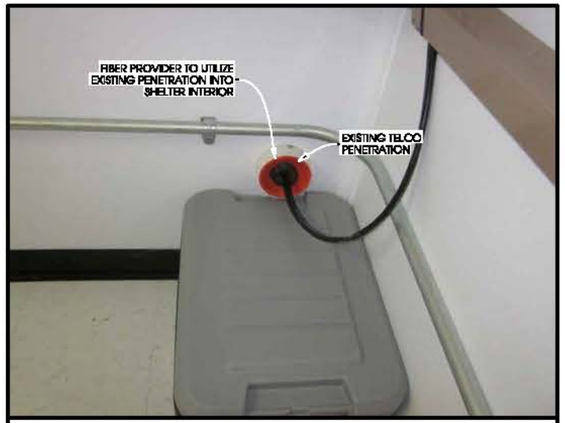
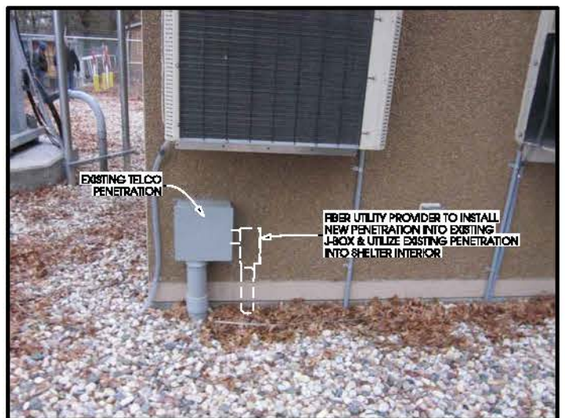
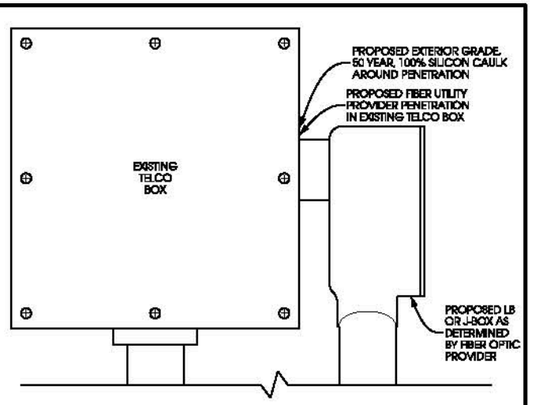


A C-2 **PROPOSED FIBER PENETRATION (SHELTER INTERIOR)**

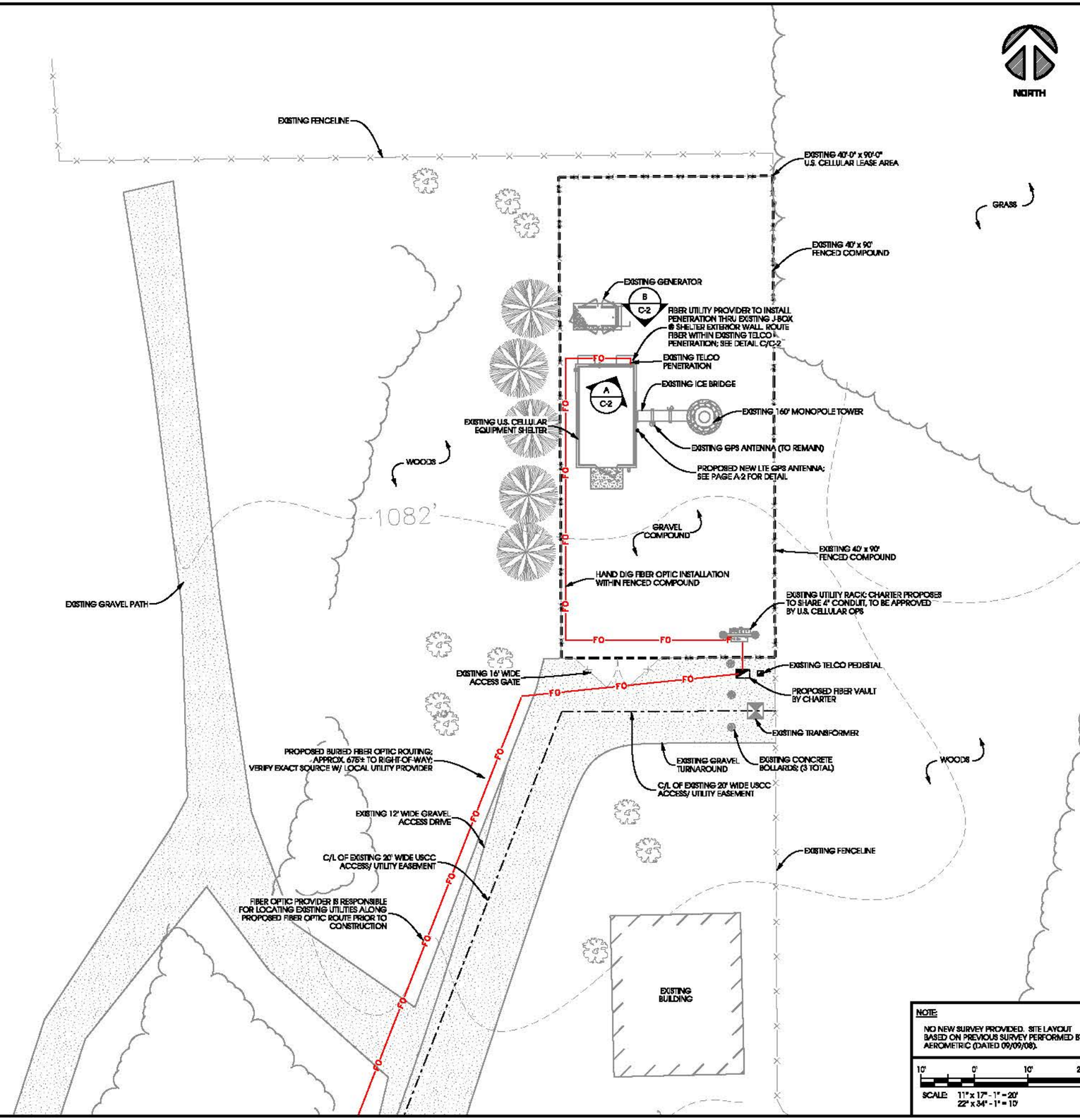


B C-2 **PROPOSED FIBER PENETRATION (SHELTER EXTERIOR)**



C C-2 **PROPOSED TELCO BOX PENETRATION DETAIL**

SCALE: NTS



NOTE:

NO NEW SURVEY PROVIDED. SITE LAYOUT BASED ON PREVIOUS SURVEY PERFORMED BY AEROMETRIC (DATED 09/09/08).

10' 0' 10' 20'

SCALE: 11" x 17" - 1" = 20'
22" x 34" - 1" = 10'

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Prairie du Sac, WI 53578
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COMPOUND PLAN
STEVENS POINT SW (#774433)
STEVENS POINT, WISCONSIN

SHEET TITLE

ISSUE DATE:	PRELIMINARY LTE - 12/28/11
REVISIONS:	AZIMUTH ADJUSTMENT - 02/02/12
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PLOT DATE:	2/2/2012
PROJECT #:	6471
FILE NAME:	C-2.dgn
SHEET NUMBER:	C-2

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LTE ADDITION NOTE:

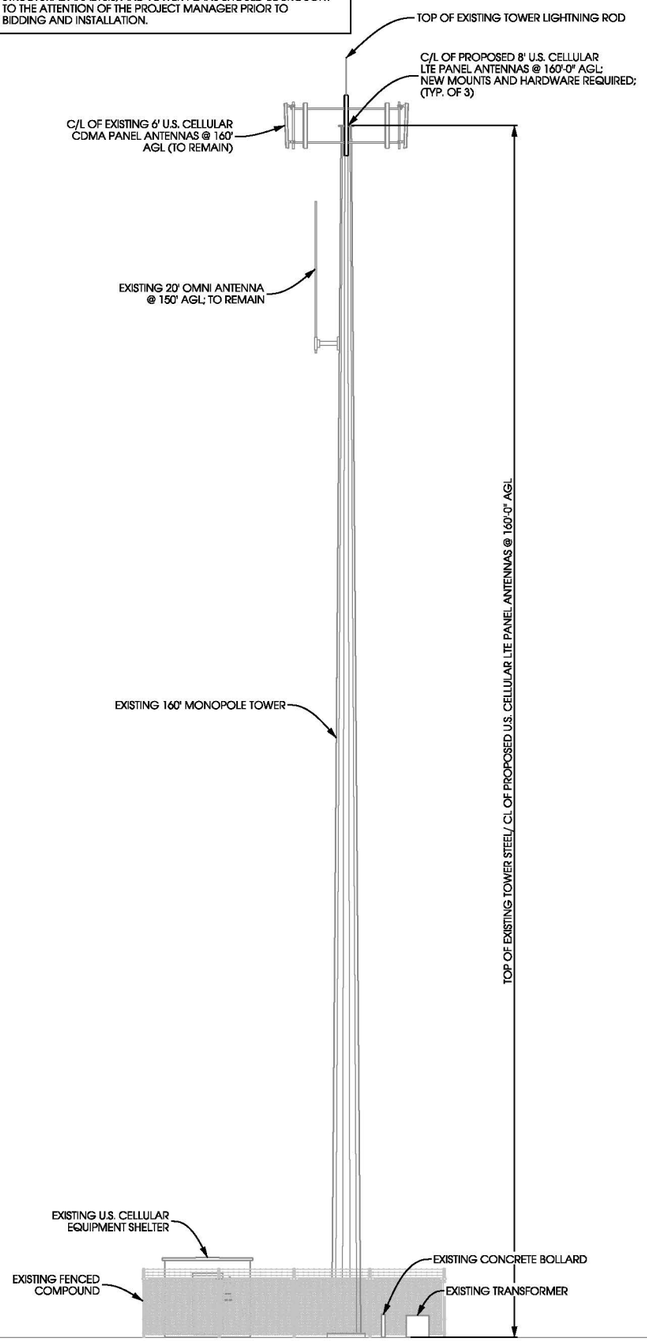
ANTENNA LAYOUT BASED ON LTE INVENTORY - SEE PAGE T-1.

REFER TO STRUCTURAL ANALYSIS AS IDENTIFIED ON PAGE T-1. CONTRACTOR TO THOROUGHLY REVIEW THE TOWER STRUCTURAL ANALYSIS FOR INFORMATION PERTAINING TO TOWER UPGRADES, MOUNTING TYPES, ANTENNA HEIGHTS, AND COAX ROUTING. ANY DISCREPANCIES BETWEEN THE DRAWINGS, STRUCTURAL ANALYSIS, AND TOWER PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER PRIOR TO BIDDING AND INSTALLATION.

NOTES:

CONTRACTOR TO VERIFY HEIGHT AND DIRECTION OF ANTENNA WITH PROJECT MANAGER.

ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH.



A / A-1 **TOWER PROFILE [SOUTH ELEVATION]**

SCALE: 11" x 17" - 1" = 20'-0"
22" x 34" - 1" = 10'-0"

TOWER ELEVATION - LOOKING NORTHEAST -

ANTENNA LEGEND:

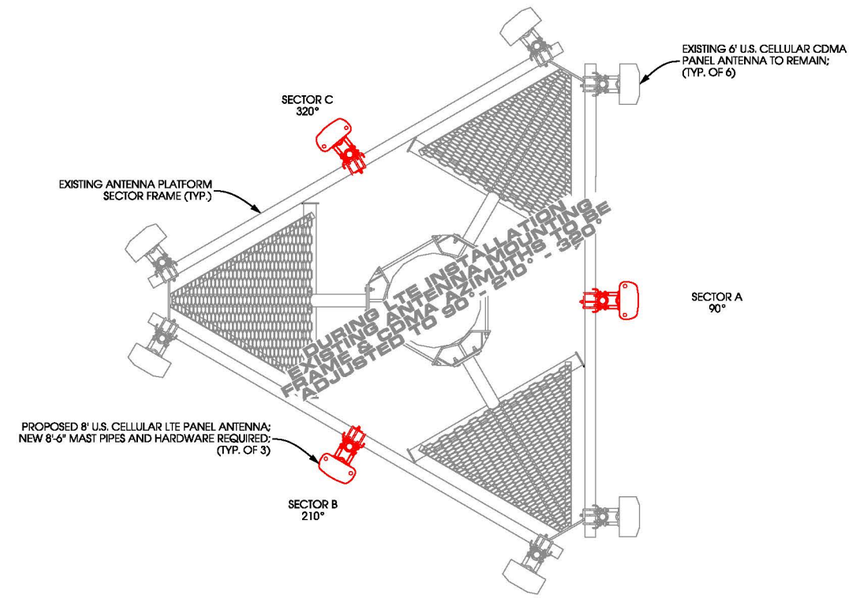
EXISTING CDMA ANTENNA TO REMAIN

PROPOSED LTE ANTENNA TO BE INSTALLED

NOTE:

ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH

NORTH



SECTOR	MAKE AND MODEL	MECHANICAL DOWNTILT	ANTENNA HEIGHT	AZIMUTH	COAX COLOR CODING	CABLE LENGTH	CABLE DIA.
A	8' LTE PANEL ANTENNA	X°	160'	90°	RED	185'	1 5/8"
					RED		1 5/8"
B	8' LTE PANEL ANTENNA	X°	160'	210°	WHITE	185'	1 5/8"
					WHITE		1 5/8"
C	8' LTE PANEL ANTENNA	X°	160'	320°	BLUE	185'	1 5/8"
					BLUE		1 5/8"

TO BE VERIFIED WITH RF ENGINEER

* GENERAL PLATFORM ORIENTATION BASED ON EXISTING ANTENNA AZIMUTH INFORMATION.

1ST TAPE - FOR SECTOR IDENTIFICATION:

ALPHA	(SECTOR 1)	RED
BETA	(SECTOR 2)	WHITE
GAMMA	(SECTOR 3)	BLUE

2ND TAPE - FOR TECHNOLOGY IDENTIFICATION:

CDMA	YELLOW
GSM	VIOLET
LTE	ORANGE

FREQUENCY BAND (<1" WIDE, OVER TECH. BAND):

700	GREEN
800	BROWN
1900	BLUE
2100	WHITE

USE SCOTCH VINYL TAPE 35. AVAILABLE AT GRAYBAR OR LOCAL 3M DISTRIBUTOR.

NOTES:

1. BEGIN SECTOR BAND >10" FROM CABLE TERMINATION.
2. SECTOR POSITION BANDS INDICATE LINE 1, LINE 2, ETC. REPEAT FOR EACH UNIQUE TECHNOLOGY.
3. IF ANTENNA IS DUPLEXED, BOTH TECHNOLOGY BANDS SHOULD BE USED.

B / A-1 **ANTENNA PLATFORM ASSIGNMENT**

SCALE: NTS

Edge Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

TOWER ELEVATION
STEVENS POINT SW [#774433]
STEVENS POINT, WISCONSIN

SHEET TITLE:

ISSUE DATE:
PRELIMINARY LTE - 12/28/11

REVISIONS:
AZIMUTH ADJUSTMENT - 02/02/12

DRAWN BY: BL
CHECKED BY: ABB
PLOT DATE: 2/2/2012
PROJECT #: 6471
FILE NAME: A-1.dgn

SHEET NUMBER: **A-1**

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NOTES:

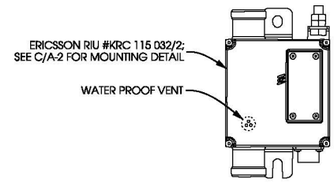
DO NOT COVER THE WATER-PROOF VENT VALVE; THE UNIT IS VENTILATED THROUGH WATER-PROOF VENT VALVE. IT IS IMPORTANT THAT THE VALVE IS NOT SILTED UP.

THE RIU CAN BE PAINTED AS LONG AS THE WATER-PROOF VENT VALVE IS NOT CLOGGED AND THE CONNECTORS ARE NOT PAINTED.

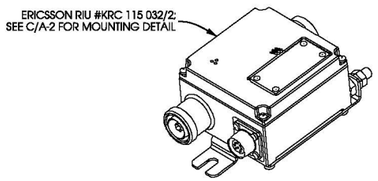
MOUNT THE RIU IN AN UPRIGHT VERTICAL POSITION WITH RET- CONNECTOR POINTING DOWNWARDS.

APPROX. DIMENSIONS: 5.5" x 3.5" x 2.5"

APPROX. WEIGHT: 1.7 LBS



ELEVATION VIEW



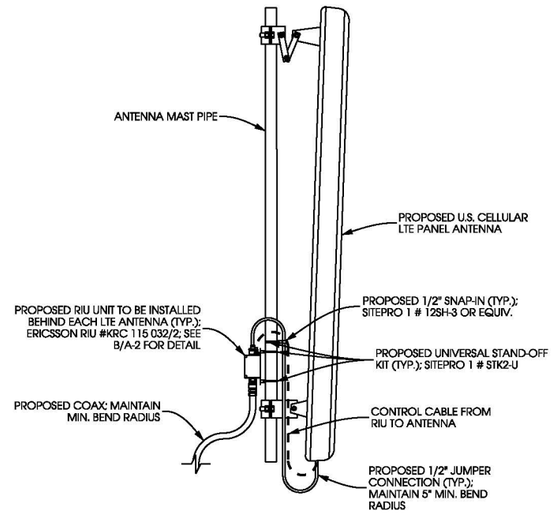
ISOMETRIC VIEW

A / A-2 **RIU DETAIL**

SCALE: NTS

NOTE:

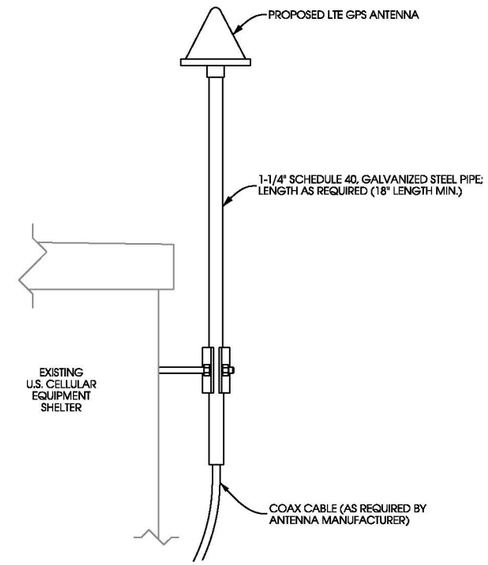
THIS DETAIL SHOWN FOR SCHEMATIC PURPOSES ONLY; SEE PAGE A-1 FOR PLATFORM LAYOUT.



TYP. EACH SECTOR

B / A-2 **RIU MOUNT DETAIL**

SCALE: NTS



C / A-2 **GPS MOUNT DETAILS**

SCALE: NTS

EXISTING U.S. CELLULAR UTILITIES

EXISTING U.S. CELLULAR ANTENNA PLATFORM

Edge Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

ANTENNA INSTALLATION DETAILS

STEVENS POINT SW [#774433]

STEVENS POINT, WISCONSIN

SHEET TITLE:

ISSUE DATE:	PRELIMINARY LTE - 12/28/11
REVISIONS:	AZIMUTH ADJUSTMENT - 02/02/12
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CHECKED BY:	ABB
PLOT DATE:	2/2/2012
PROJECT #:	6471
FILE NAME:	A-2.dgn
SHEET NUMBER:	A-2

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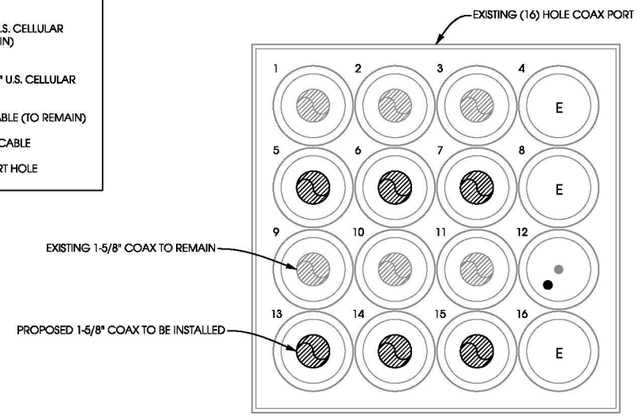
COAX LEGEND:

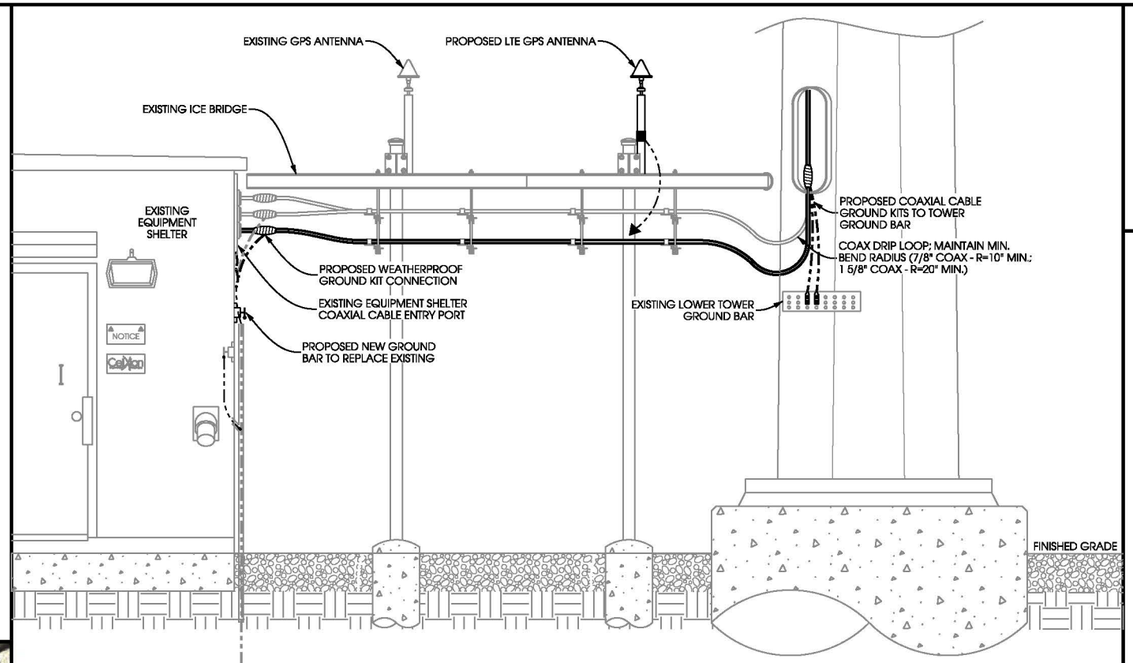
- = EXISTING 1 5/8" U.S. CELLULAR COAX (TO REMAIN)
- = PROPOSED 1 5/8" U.S. CELLULAR COAX
- = EXISTING GPS CABLE (TO REMAIN)
- = PROPOSED GPS CABLE
- E = OPEN COAX PORT HOLE



PORT VIEW (FROM INTERIOR)

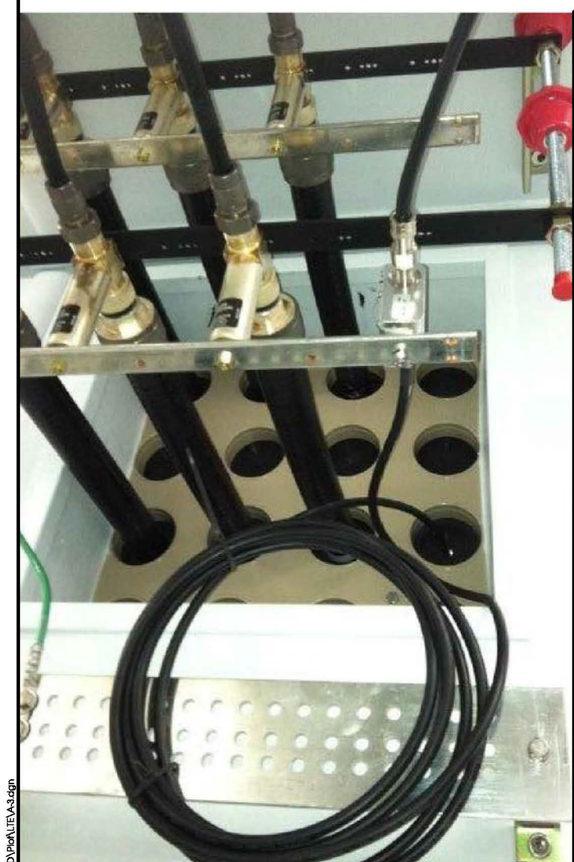
A / A-3 **COAX PORT LAYOUT - SHELTER INTERIOR**

SCALE: NTS

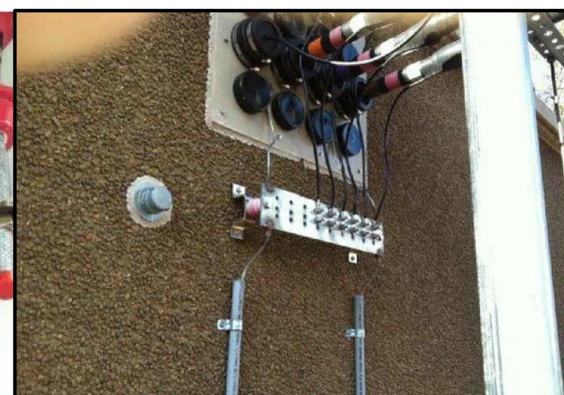


C / A-3 **COAXIAL CABLE ROUTING**

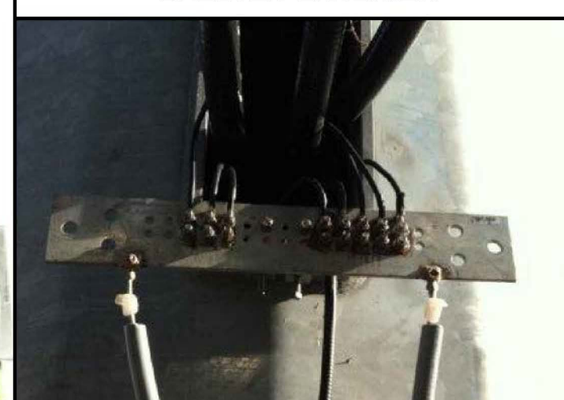
SCALE: NTS



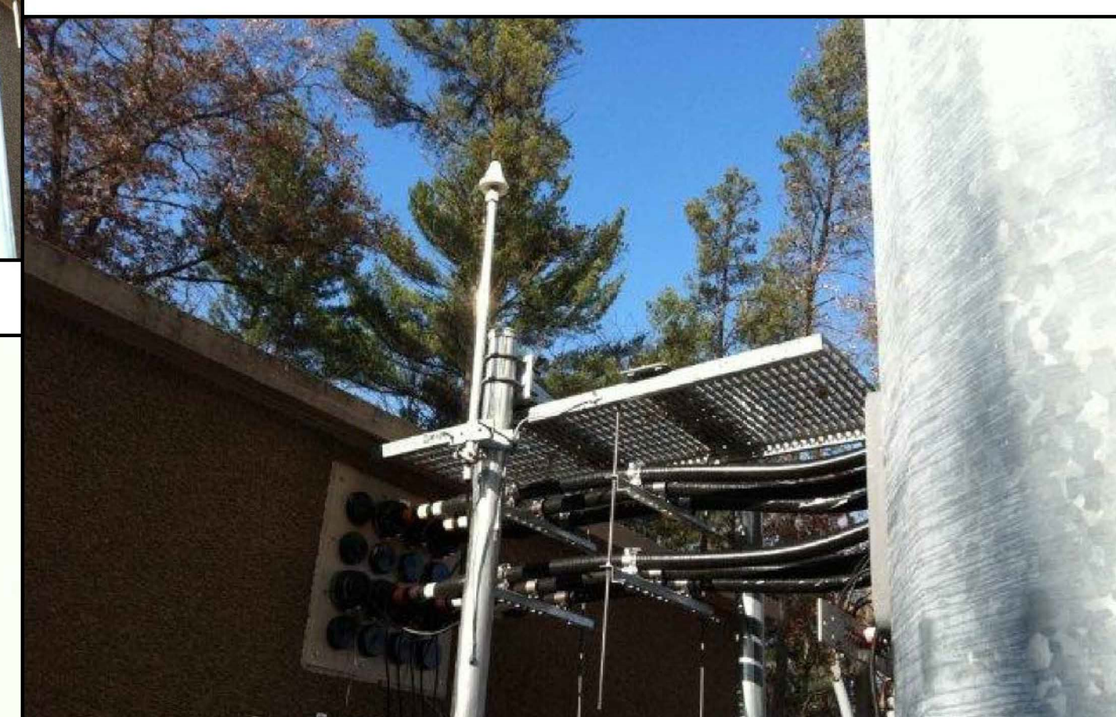
COAX PORT LAYOUT - SHELTER INTERIOR -



COAX PORT LAYOUT - SHELTER EXTERIOR-



EXISTING LOWER TOWER GROUND BAR



EXISTING ICE BRIDGE PROFILE

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624 Water Street
Prairie du Sac, WI 53578
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608.644.1549 fax
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SHEET TITLE:

COAX ROUTING DETAILS

STEVENS POINT SW [#774433]

STEVENS POINT, WISCONSIN

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PLOT DATE:	2/2/2012
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FILE NAME:	A-3.dgn
SHEET NUMBER:	A-3

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ANTENNA & COAXIAL CABLE INSTALLATION

I. SCOPE:

THIS SECTION COVERS THE SPECIFICATIONS FOR ANTENNA AND COAXIAL CABLE INSTALLATION. THE AREAS OF FOCUS ARE THE INSTALLATION OF: ANTENNAS, COAXIAL, CONNECTIONS, AND ICE BRIDGE. BEND ON TOWER GROUND BAR; AND ON BUILDING GROUND BAR BEFORE ENTRY INTO WAVEGUIDE PORTS. 4" CABLE BOOTS

II. ANTENNAS:

A: ANTENNAS SHALL BE PLUMB AND INSTALLED SO THAT ENTIRE WHIP EXTENDS ABOVE VERTICAL PIPE MOUNT. DIRECTIONAL ANTENNAS SHALL BE ORIENTED TO PROPER AZIMUTH, PROVIDED ON THE RF SPECIFICATION SHEET. NOTE: THE ANTENNA MAY BE ORIENTED USING THE REFLECTOR AS THE REFERENCE. ADJUSTING ITS AZIMUTH 180 DEGREES FROM MAXIMUM ANTENNA RADIATION.

B: MICROWAVE ANTENNAS (DISHES) SHALL BE ASSEMBLED PER MANUFACTURER'S DRAWINGS. STIFF ARMS AND RADOMES SHALL BE INSTALLED WITH POLARIZATION PROVIDED BY RF SPECIFICATION SHEET. IF PATH IS NOT READY TO ALIGN, DISH SHOULD BE POINTED TOWARD CALCULATED AZIMUTH, OR DIRECTION OF FIELD STAKE DENOTING OPPOSITE END. TWO STIFF ARMS SHALL BE PROVIDED FOR MICROWAVE DISHES 6'-0" IN DIAMETER AND GREATER.

C: A TRANSIT SHALL BE USED TO PROPERLY ALIGN CELLULAR AND MICROWAVE ANTENNAS.

III. COAXIAL CABLE:

A: COAXIAL CABLE SHALL BE SUPPORTED WITH SNAP IN HANGERS. SNAP IN HANGERS SHOULD BE USED EVERY 3 FEET THE ENTIRE HEIGHT OF TOWER. ANGLE ADAPTERS OR ROUND MEMBER ADAPTERS WITH BUTTERFLY CLAMPS SHALL BE USED ELSEWHERE, I.E. SIDEARMS, PLATFORMS, AND MICROWAVE MOUNTS.

B: COAXIAL CABLE SHALL ALSO BE SUPPORTED WITH HOISTING GRIPS, INSTALLED AT MAXIMUM INTERVALS OF 200 FEET. HOISTING GRIPS SHALL BE ATTACHED WITH SHACKLES, BOLTED IN THE 7/16" HOLE OF WAVEGUIDE LADDER.

C: ALL JUMPERS USED BETWEEN COAXIAL CABLE AND ANTENNA SHALL BE SUPPORTED WITHIN 18 INCHES OF ANTENNA, USING BUTTERFLY CLAMPS WITH ANGLE ADAPTERS OR ROUND MEMBER ADAPTERS AROUND PIPES. CELLULAR ANTENNAS TYPICALLY USE 6' JUMPERS; MICROWAVE DISHES USE 3' JUMPERS.

D: COAXIAL CABLE SHALL BE NEATLY BENT WHEN REQUIRED, USING A MINIMUM BENDING RADIUS OF 10 TIMES THE DIAMETER OF THE COAXIAL CABLE. DRIP LOOPS SHOULD BEGIN AT THE ICE BRIDGE. THE BEND IN THE COAXIAL CABLE SHOULD BE AT A LOWER HEIGHT THAN THE ENTRY PORT.

E: COAXIAL CABLE SHALL BE SUPPORTED WITH SNAP IN HANGERS ON THE WAVEGUIDE LADDER UNDER ICE BRIDGE. COAXIAL CABLE SHOULD BE NEATLY CUT 16" INSIDE BUILDING AND TERMINATED AT THE QUARTER WAVE SHORTS.

F: CONNECTORS WILL NORMALLY BE PROVIDED FIRST OFF REEL FROM FACTORY. CONNECTORS TERMINATED IN BUILDING SHALL BE NEATLY INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

G: OPENINGS #1, #2, AND #3 SHOULD BE USED FOR THE X SECTOR; OPENINGS #5, #6, AND #7 SHOULD BE USED FOR THE Y SECTOR; OPENINGS #9, #10, AND #11 SHOULD BE USED FOR THE Z SECTOR. OPENINGS #4, #8, AND #12 SHOULD BE RESERVED FOR MICROWAVE WAVEGUIDE.

H: COAXIAL CABLES SHOULD BE LABELED WITH TAGS INSIDE THE BUILDING.

SECTOR INDICATOR - PRIMARY COLORS
USE 2" WIDE COLORED TAPE TO INDICATE SECTORS
X SECTOR FOR SECTORED SITE: BROWN
Y SECTOR FOR SECTORED SITE: VIOLETZ SECTOR FOR SECTORED SITE: ORANGEFUNCTION INDICATOR - SECONDARY COLORS
USE 1" WIDE COLORED TAPE TO INDICATE FUNCTION.
RX1: YELLOW RX2: GREEN TX1: RED TX2: WHITE TX3: BLUE

I: ALL EXCEPTIONS NEED TO BE VERIFIED WITH THE PROJECT MANAGER.

IV. CONNECTORS:

A: ALL CONNECTIONS, AND GROUNDING KITS SHALL BE WEATHER PROOFED USING COLD SHRINK OR ANDREW APPROVED WEATHER STRIPPING.
NOTE: NO PORTION OF CONNECTOR SHALL BE EXPOSED TO THE ELEMENTS.

B: COAXIAL CABLE SHALL BE GROUNDED USING GROUNDING KITS AT THE TOP, BELOW THE BEND; BOTTOM, ABOVE THE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

C: GROUNDING KITS SHALL BE NEATLY INSTALLED SO THAT THE JUMPER RUNS IN THE SAME DIRECTION AS THE COAXIAL AND GROUND BAR. JUMPER WIRE SHOULD RUN IN A DIRECT PATH TO THE GROUND BAR/TOWER LADDER. BUT HAVE ADEQUATE SLACK FOR EXPANSION, CONTRACTION, AND REPAIR. NON-OXID GREASE SHOULD BE APPLIED BETWEEN LUG AND BAR/TOWER.

D: TOWER GROUND BAR SHALL BE INSTALLED ON THE ANGLE BEHIND THE FIRST DIAGONAL WAVEGUIDE LADDER RUNG, ABOVE 8'6".

V. ICE BRIDGE:

A: ICE BRIDGE SHALL BE ATTACHED AT ONE END WITH BOLTS, TO THE ANGLE ON THE BUILDING, ABOVE THE WAVEGUIDE PORTS. SINCE THE ANGLE (28") IS TYPICALLY WIDER THAN THE ICE BRIDGE (24"), THE BRIDGE SHOULD BE CENTERED SO THAT IS COVERS THE WAVEGUIDE PORT ENTRY WHICH IS 24" WIDE. THE OPPOSITE END OF BRIDGE SHOULD BE 6" FROM TOWER FACE. IF FIELD CUT, IT SHOULD BE FILED SMOOTH AND COLD GALVANIZED.

B: IF BRIDGE IS SUPPORTED BY VERTICAL PIPES, THEY SHOULD BE CUT EVENLY AND CAPPED, APPROXIMATELY 18" ABOVE ICE BRIDGE.

C: 2 TIER WAVEGUIDE LADDER SHALL BE INSTALLED UNDER ICE BRIDGE PROPERLY SUPPORTED PER TOWER MANUFACTURER'S DRAWINGS.

ANTENNA INSTALLATION NOTES

GROUNDING SYSTEM NOTES

1. SCOPE:

THIS SECTION COVERS THE SPECIFICATIONS FOR CELL SITE GROUNDING. THE AREAS OF FOCUS ARE: TOWER, BUILDING, AND INSTALLATION METHODS.

2. GENERAL:

2.1 ALL GROUND RODS SHALL BE 5/8" COPPER CLAD STEEL 10 FT. LONG. GROUND RODS SHALL BE EQUALLY SPACED AT 10 FT. INTERVALS. REFER TO SITE GROUNDING PLAN FOR DETAILS AND PLACEMENT WITH GROUNDING.

2.2 GROUNDING A SYSTEM SHALL BE MEGGAR TESTED TO ASSURE SATISFYING 5 OHMS OR LESS RESISTANCE.

2.3 ALL CADWELD CONNECTIONS TO GALVANIZED MATERIAL SHALL BE PROPERLY PREPARED TO ASSURE A SATISFACTORY CADWELD. THE CADWELD CONNECTION SHALL BE COATED WITH A COLD GALVANIZING SPRAY .

2.4 CONTRACTOR SHALL PROVIDE PHOTO DOCUMENTATION OF THE GROUND SYSTEM BY PROVIDING A CD TO US CELLULAR.
REQUIRED PHOTOS SHALL INCLUDE:
* ALL BUSS BARS AND COAX GROUND CONNECTIONS.
* TOWER COUNTERPOISE.
* BUILDING COUNTERPOISE.* CONNECTIONS TO POWER, TELCO, A.C., FENCING AND ICE BRIDGE.
* CONNECTIONS TO POWER, TELCO, A.C., FENCING AND ICE BRIDGE.

2.5 CONTRACTOR SHALL PROVIDE AS-BUILT PLANS SHOWING LOCATION AND DIMENSIONS OF BELOW GRADE GROUNDING FEATURES.

3. INSTALLATION:

3.1 ALL EXTERIOR ABOVE AND BELOW GROUND CONNECTIONS SHALL BE CADWELD. NO ALUMINUM CONNECTORS SHALL BE USED UNLESS SPECIFIED OTHERWISE ON PLANS.

3.2 NO RIGHT-ANGLE CADWELD CONNECTION (OTHER THAN GROUND RODS TO GROUND RING CONNECTION) SHALL BE USED. ALL WIRE-TO-WIRE CONNECTIONS SHALL UTILIZE "Y-TYPE" CONNECTIONS.

3.3 ALL VERTICAL JUMPERS SHALL NOT BE WELDED WITHIN TWO (2) FT. OF THE GROUND ROD.

3.4 KOPR SHIELD REQUIRED FOR ALL MECHANICAL CONNECTIONS.

3.5 ALL CADWELDS FINISHED WITH COLD GALVANIZED SHIELD.

4. TOWER:

4.1 A #2 SOLID BARE COPPER WIRE SHALL BE BURIED A MINIMUM FOUR (4) FT. UNDERGROUND AND ENCIRCLE TOWER FOUNDATION TWO (2) FT. FROM THE FOUNDATION. THIS GROUNDING SYSTEM SHALL BE CONNECTED TO THE BUILDING GROUND RING IN TWO (2) PLACES USING CADWELD CONNECTIONS. SUCH CONNECTIONS SHALL BE "Y-TYPE" CADWELD CONNECTIONS.

4.2 THREE (3) #2 SOLID BARE COPPER WIRES SHALL BE RUN FROM THE TOWER GROUND RING TO THE TOWER. THESE WIRES SHALL BE CONNECTED TO THE TOWER USING A CADWELD CONNECTION. NO SHARP BENDS SHALL BE PLACED IN THESE GROUND LEADS.

4.3 GROUND SYSTEM SHALL INCLUDE THE INSTALLATION OF AN ISOLATED LIGHTNING ROD AT THE TOP OF THE TOWER ABOVE THE HIGHEST ANTENNA. A #2 INSULATED COPPER WIRE SHALL BE CONNECTED TO THE TOWER LIGHTNING ROD USING AN APPROVED MECHANICAL CONNECTOR, OR CADWELDED, TO TOWER STEEL.

5. BUILDING:

5.1 A #2 SOLID BARE COPPER WIRE SHALL BE BURIED A MINIMUM OF FOUR (4) FT. UNDERGROUND AND ENCIRCLE BUILDING FOUNDATION TWO (2) FEET FROM THE FOUNDATION. GROUND RING CORNERS SHALL BE INSTALLED WITH A MINIMUM TWO FOOT RADIUS (NO SHARP RIGHT ANGLE BENDS).

5.2 A #2 SOLID BARE COPPER WIRE SHALL BE INSTALLED FROM THE BUILDING GROUND RING AND CONNECTED TO THE COPPER BUS BAR LOCATED ON THE OUTSIDE OF BUILDING UNDER THE WAVEGUIDE PORT WITH A MINIMUM NINE (9) INCHES RADIUS. A "Y-TYPE" OR "PARALLEL-TYPE" CADWELD CONNECTION SHALL BE USED FOR ALL CONNECTIONS TO THE GROUND RING.

5.3 ONE (1) ADDITIONAL #2 SOLID BARE GROUND WIRE LEAD SHALL BE INSTALLED DIRECTLY BELOW THE ELECTRICAL SERVICE ENTRANCE PORT (GROUND LUG ON THE MAIN DISCONNECT INSIDE THE BUILDING). THIS WIRE SHALL BE CONNECTED TO THE BUILDING GROUND RING USING "Y-TYPE" CADWELD CONNECTION.

5.4 ONE (1) ADDITIONAL #2 SOLID BARE COPPER GROUND WIRE LEAD SHALL BE INSTALLED DIRECTLY BELOW EACH HVAC UNIT.

6. FENCING:

6.1 A #2 SOLID BARE COPPER GROUND WIRE SHALL BE INSTALLED FROM THE FENCE CORNER POSTS TO THE GROUND RING AND SHALL BE BURIED A MINIMUM FOUR (4) FT. UNDERGROUND. THESE RUNS SHALL INCLUDE GROUND RODS EQUALLY SPACED AT 10 FT. INTERVALS. THESE RUNS SHALL BE BROUGHT ABOVE GROUND LEVEL AND SUPPORTED ABOVE GROUND WITH TEMPORARY POSTS UNTIL PERMANENT FENCING IS INSTALLED. GROUND WIRE SHALL BE CONNECTED TO THE FENCE POSTS USING CADWELD TYPE CONNECTIONS.

7. EXISTING GROUND SYSTEMS:

7.1 CONTRACTOR SHALL PROVIDE CONNECTIONS TO ALL EXISTING GROUND SYSTEMS AT THE SITE (SCADA, TELEMETRY, ETC.).

8. COMPLIANCE:

8.1 ELECTRICAL CODE COMPLIANCE

COMPLY WITH APPLICABLE LOCAL ELECTRICAL CODES REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION, AND NEC AS APPLICABLE TO ELECTRICAL GROUNDING AND BONDING, PERTAINING TO SYSTEMS, CIRCUITS AND EQUIPMENT.

8.2 UL COMPLIANCE

COMPLY WITH APPLICABLE REQUIREMENTS OF UL467, 486A AND 869 PERTAINING TO GROUNDING AND BONDING OF SYSTEMS, CIRCUITS AND EQUIPMENT. USE GROUNDING AND BONDING PRODUCTS WHICH ARE UL-LISTED AND LABELED FOR THEIR INTENDED USAGE.

8.3 IEEE COMPLIANCE

COMPLY WITH APPLICABLE REQUIREMENTS OF RECOMMENDED INSTALLATION PRACTICES OF IEEE STANDARDS 80, 81, 141 AND 142 PERTAINING TO GROUNDING AND BONDING OF SYSTEMS, CIRCUITS AND EQUIPMENT.

GROUNDING NOTES

MASTER GROUND BAR NOTES:

THE MASTER GROUND BAR (MGB) IS THE EXTENSION OF THE BUILDING GROUNDING SYSTEM AND SERVES AS THE MAIN POINT OF BONDING WITHIN THE FACILITY. THE MGB WILL BE THE COMMON GROUND POINT WHERE ALL GROUND POINTS FOR THE FACILITY WILL CONNECT.

THE MGB SHOULD BE LOCATED SO THAT THE BONDING CONDUCTOR IS AS SHORT AND STRAIGHT AS POSSIBLE TO THE FACILITY GROUND RING.

THE MGB WILL BE LOCATED NEAREST THE PRIMARY GROUND WHILE MAINTAINING HEIGHT AND DISTANCE CLEARANCES REQUIRED BY APPLICABLE ELECTRICAL CODES.

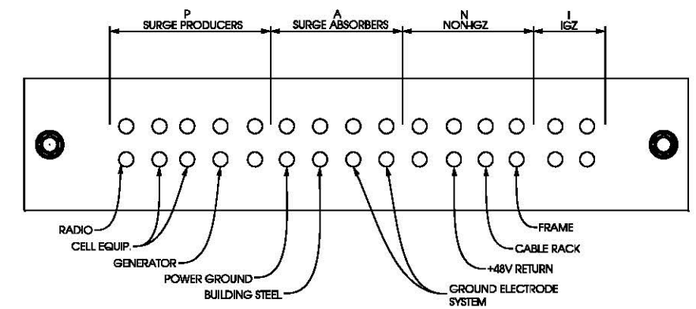
THE MGB WILL BE PREDRILLED COPPER ELECTRO TIN-PLATED BUS BAR WITH STANDARD NEMA BOLT SIZING AND SPACING WITH MINIMUM DIMENSIONS OF 1/4" THICK BY 4" WIDE AND 24" IN LENGTH. THE LENGTH MAY BE LONGER TO MEET FUTURE GROWTH PROJECTIONS.

THE MGB WILL BE INSULATED FROM ITS SUPPORT WITH MINIMUM 2" SEPARATION REQUIREMENT ON ISOLATED STANDOFFS.

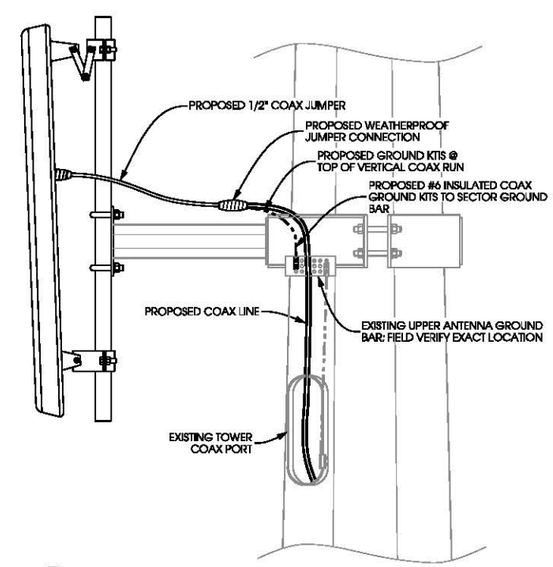
THE MGB WILL BE PERMANENTLY AND APPROPRIATELY LABELED AND IDENTIFIED WITH THE "P", "A", "N" AND "I" SECTION OF THE MGB CLEARLY AND PERMANENTLY IDENTIFIED.

P = PRODUCERS, A = ABSORBERS, N = NON-PRODUCERS, I = ISOLATED (SWITCH, DCS)

ALL CONNECTIONS MADE TO MGB WILL BE STANDARD 2-HOLE LUG.



GROUNDING NOTES



A / G-1 **ANTENNA GROUNDING DETAIL**
SCALE: NTS

Edge
Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

ANTENNA & GROUNDING NOTES
STEVENS POINT SW [#774433]
STEVENS POINT, WISCONSIN

SHEET TITLE:

ISSUE DATE:	PRELIMINARY LTE - 12/28/11
REVISIONS:	AZIMUTH ADJUSTMENT - 02/02/12
DRAWN BY:	BL
CHECKED BY:	ABB
PLOT DATE:	2/2/2012
PROJECT #:	6471
FILE NAME:	G-1.dgn
SHEET NUMBER:	G-1

E:\6400\6471\CAD\PlanLTE\G-1.dgn

© EDGE CONSULTING ENGINEERS, INC.

RESOLUTION

[5431 HIGHWAY 66]

BE IT RESOLVED by the Common Council of the City of Stevens Point, Portage County, Wisconsin, that based upon the application and after reviewing the Plan Commission record and hearing the testimony of interested parties, the Common Council determines that all conditions required have been met, the property located at **5431 HIGYWAY 66 (Parcel ID 2408-14-4200-01)**, NW SE EXC PRCL LYG N & W OF HWY 66 DES 198/636 & EXC PRT DES IN 203/249 S14 T24 R8 502/346-7 755625-RES Stevens Point, Portage County, Wisconsin, is hereby granted a Conditional Use Permit for the purposes of constructing a garage, as shown on the attached plans. The Conditional Use Permit is subject to the following conditions:

1. Any hazardous type of materials stored within the structure shall be properly contained.

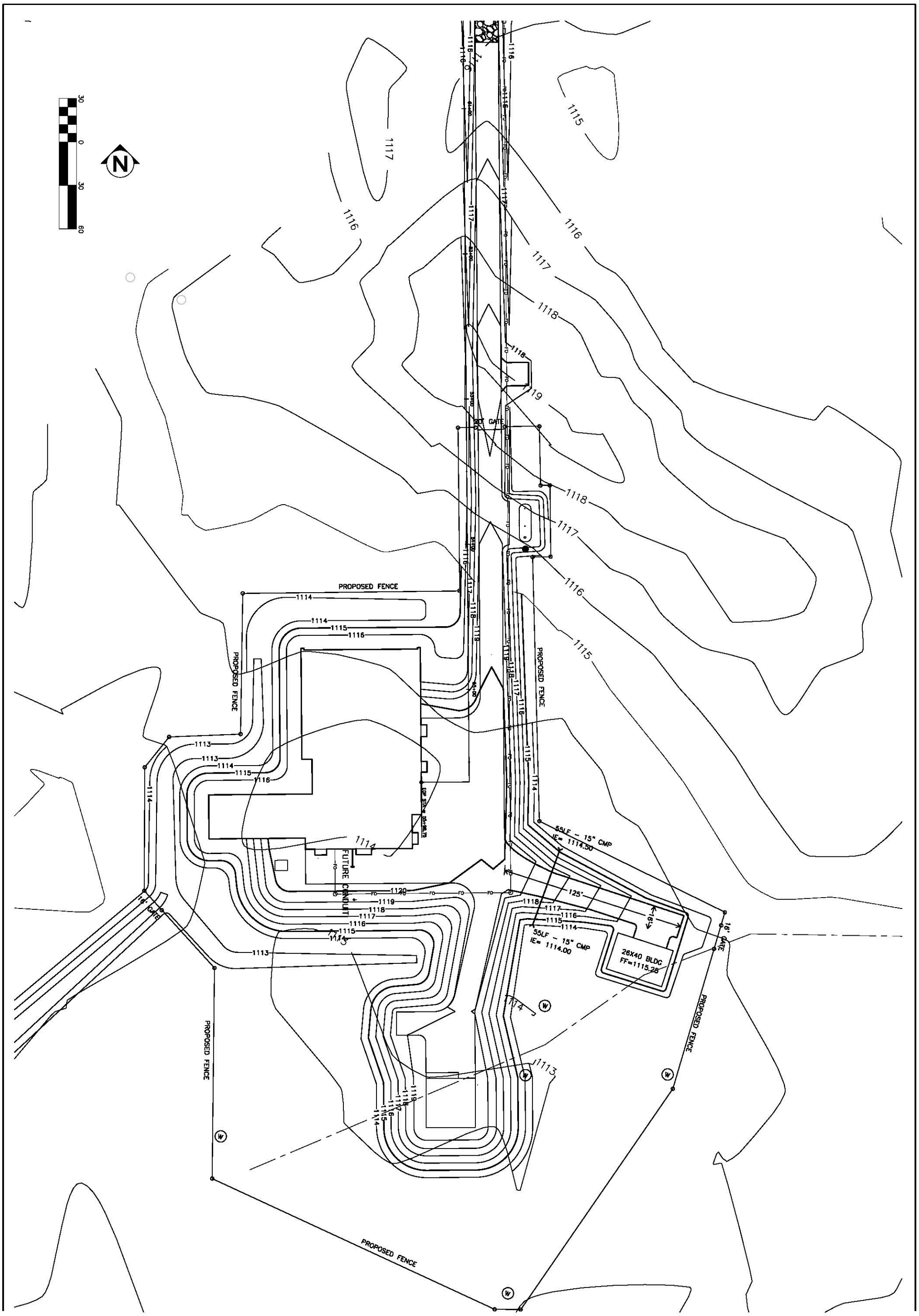
Such approval constitutes a Conditional Use under the City's ordinances.

Approved: _____
Andrew J. Halverson, Mayor

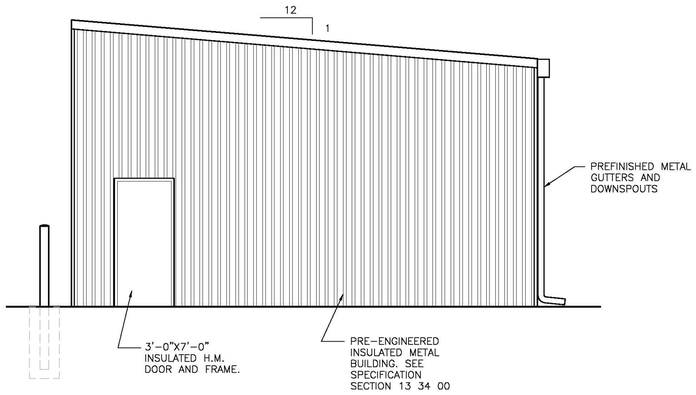
Attest: _____
John Moe, City Clerk

Dated: March 19, 2012
Adopted: March 19, 2012

Drafted by: Michael Ostrowski
Return to: City Clerk

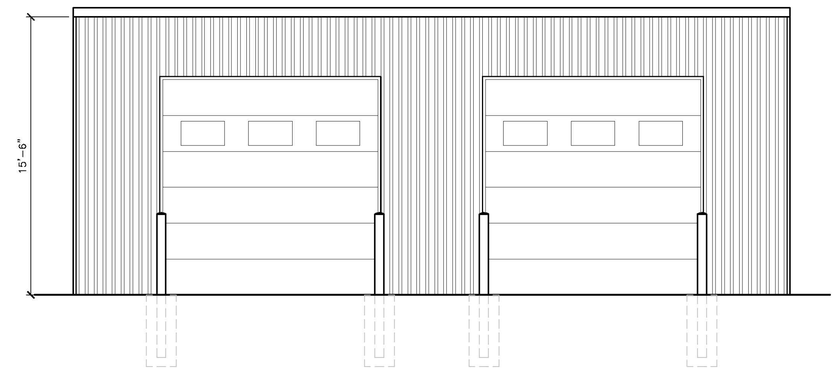


SHEET	SHEET TITLE	SEH FILE NO. ASTEPT110929		WELL 11		SEH
CX	PROPOSED TRUCK TURN-AROUND AND PERIMETER FENCING	PROJECT NO.		WATER TREATMENT PLANT		425 W. WATER ST., STE 300
		ISSUE DATE FEB. 20 2012		CITY OF		APPLETON, WI 54911
		DESIGNED BY JMP		STEVENS POINT, WISCONSIN		PHONE: 920.380.2800
		DRAWN BY JMP				FAX: 920.380.2801
		Short Elliott Hendrickson, Inc.® (SEH)	MARK DATE DESCRIPTION			WATTS: 888.413.4214
		© 2011 Short Elliott Hendrickson, Inc.	REVISIONS			www.sehinc.com



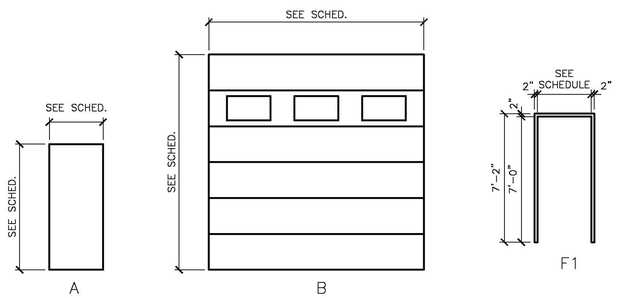
1 EXTERIOR ELEVATION

0 4'-0" 8'-0" 16'-0"



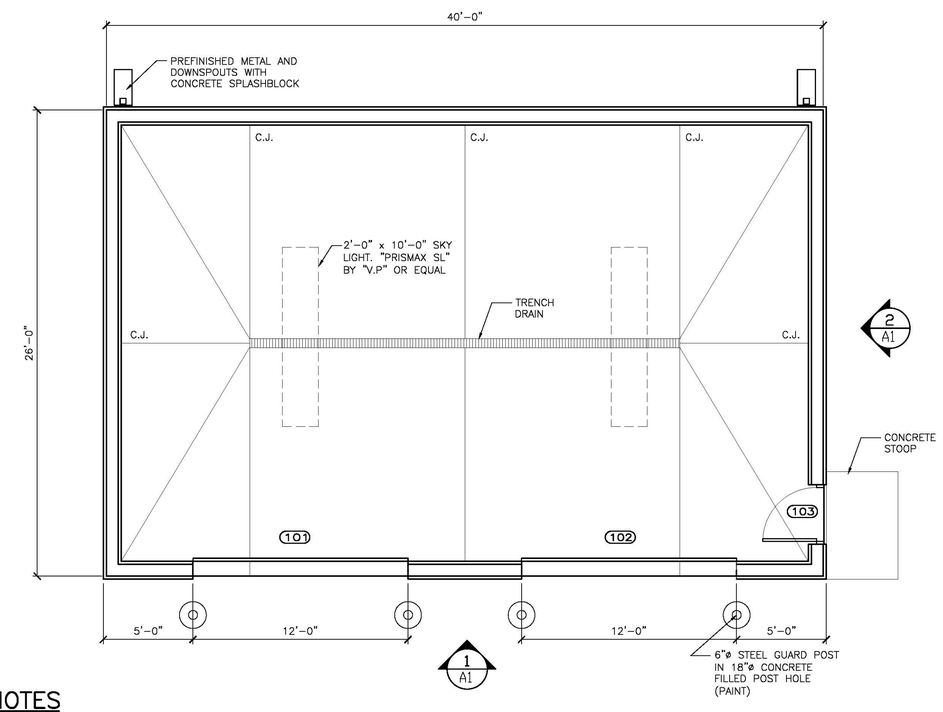
2 EXTERIOR ELEVATION

0 4'-0" 8'-0" 16'-0"



DOOR AND FRAME TYPES

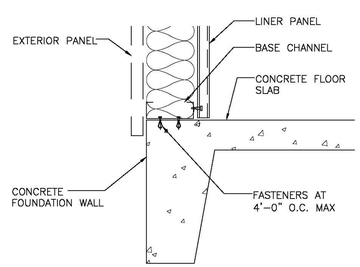
ROOM OPENING SCHEDULE															
		OPENING						FRAME							
		SIZE								DETAILS					
OPEN NO.	LEAFS	WD	HGT	THK	TYPE	MAT'L	FIRE RATING	TYPE	MAT'L	HEAD	JAMB	SILL	GLASS	HDWR GROUP	REMARKS
101	1	12'-0"	12'-0"	2"	B										
102	1	12'-0"	12'-0"	2"	B										
103	1	3'-0"	7'-0"	1 3/4"	A			F1						1	



4 FLOOR PLAN

0 4'-0" 8'-0" 16'-0"

N



3 DETAIL

0 4'-0" 8'-0" 16'-0"

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE ACCORDING TO STATE AND LOCAL CODES.
2. ALL CONTRACTORS SHALL VERIFY EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
3. ALL CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE CONSTRUCTION DOCUMENTS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
4. DO NOT SCALE DRAWINGS FOR DIMENSIONS

425 WEST WATER STREET
SUITE 300
APPLETON, WI 54911-6058
PHONE: 920.380.2817
FAX: 920.380.8051
www.sehinc.com
SEH

WELL 11 WTP
5MGD GRAVITY FILTRATION
STEVENS POINT WATER UTILITY
STEVENS POINT, WISCONSIN

MARK	DATE	DESCRIPTION

REVISIONS

SEH FILE NO. STEPT109017
PROJECT NO. NOV 2009
ISSUE DATE
DESIGNED BY JRL
DRAWN BY JRL

SHEET TITLE
ARCHITECTURAL DRAWINGS
W.T.P. GARAGE
PLANS AND DETAILS

SHEET
A1

DRAWING NAME: P:\PT\S\STEPT\110929\Project\cad\Garage\Stevens Point Garage.dwg LAYOUT TAB: A1 PLOTTED: Feb 24, 2012 - 10:01am

ORDINANCE AMENDING THE REVISED MUNICIPAL CODE
OF THE CITY OF STEVENS POINT, WISCONSIN

The Common Council of the City of Stevens Point, Portage County, Wisconsin, do ordain as follows:

SECTION I: That Section 23.02(4)(e) of the Zoning Ordinance of the Revised Municipal Code of the City of Stevens Point pertaining to wellhead protection for Well 11 and the modification of the Wellhead Protection Overlay District uses be amended as follows:

e) Wellhead Protection Overlay District

1.0 Purpose and Authority

The residents of the City of Stevens Point depend exclusively on groundwater for a safe drinking water supply. Certain land use practices and activities can seriously threaten or degrade groundwater quality. The purpose of this Wellhead Protection Ordinance is to institute land use regulations and restrictions to protect the City's municipal water supply and well fields, and to promote the public health, safety, and general welfare of the residents of the City of Stevens Point.

Statutory authority of the City to enact these regulations was established by the Wisconsin Legislature in 1983, Wisconsin Act 410 (effective May 11, 1984), which specifically added groundwater protection to the statutory authorization for municipal planning and zoning to protect public health, safety and welfare.

1.1 Application of Regulations

The regulations specified in this Wellhead Protection Ordinance shall apply only to lands within 1,500 feet of the Stevens Point municipal wells (Cones of Depression), the Two Year Time of Travel (TOT) or within the Five Year TOT of these wells and which also lie within the City of Stevens Point corporate limits.

1.2 Definitions

1) Aquifer. A saturated, permeable geologic formation that contains and will yield significant quantities of water.

2) Cone of Depression. The area around a well, in which the water level has been lowered at least one tenth of a foot by pumping of the well. The Wisconsin Geological and Natural History Survey Special Report No. 10, entitled "Wellhead-Protection Districts in Wisconsin: An Analysis and Test Applications", identified the Cone of Depression for the neighboring municipality of Whiting to be a radius of 1,422 feet. For ease of determination, the Cone of Depression has been established as being 1,500 feet from the Stevens Point wells.

3) <u>Two Year Time of Travel (TOT)</u>. The Two Year TOT is the recharge area upgradient of the cone of depression, the outer boundary of which it is determined or estimated that groundwater and potential contaminants will take two years to reach a pumping well. The Two Year TOT for the Stevens Point well fields is calculated from the groundwater velocity equation with a time factor applied. The Two Year TOT calculations for Stevens Point Well 11 are found in the report entitled, “Well No. 11 Wellhead Protection Plan”.

4) Five Year Time of Travel (TOT). The Five Year TOT is the recharge area upgradient of the cone of depression, the outer boundary of which it is determined or estimated that groundwater and potential contaminants will take five years to reach a pumping well. The Five Year TOT for the Stevens Point Well Nos. 4, 5, 6, 7, 8, 9, and 10 is established based on flow path modeling contained in the report entitled "STEVENS POINT WISCONSIN CASE STUDY: Wellhead Protection Programs and Monitoring System Design". The Five Year TOT for Stevens Point Well 11 are found in the report entitled, “Well No. 11 Wellhead Protection Plan”.

5) Recharge Area. Area in which water reaches the zone of saturation by surface infiltration and encompasses all areas or features that supply groundwater recharge to a well.

6) Well Field. A piece of land used primarily for the purpose of locating wells to supply a municipal water system.

2.0 Wellhead Protection Overlay District A

The areas defined herein as either the Cones of Depression (Wells No. 4, 5, 6, 7, 8, 9, and 10) or the Two Year TOT (Well No. 11).

2.1 Intent

The primary portion of the Stevens Point recharge areas to be protected is the land within 1,500 feet of the Stevens Point wells, known as Wells 4,5,6,7,8,9 and 10, and within the two year TOT for Well 11, as shown on the attached maps and of the Whiting well fields described as beginning at the intersection of County Trunk HH and Hoover Road, then north to the intersection of the Wisconsin Public Service power lines located approximately one-half mile north of the point of beginning, then southwest along the WPS power line to its intersection with Alder St., then south along Alder St. to the intersection with First St., then west along First St. to its intersection with April La., then south along April La. to its intersection with County Trunk Highway HH, then east along County Trunk Highway HH to its intersection with Hoover Rd. and there terminating also shown on the attached map. These lands are subject to the most stringent land use and development restrictions because of close proximity to the wells and the corresponding high threat of contamination.

2.2 Permitted Uses

The following uses are permitted uses within Groundwater Protection Overlay District

A. Uses not listed here are to be considered prohibited uses.

1) Parks and playgrounds, provided there are no on-site waste disposal or fuel storage tank facilities

2) Wildlife areas

3) Nonmotorized trails, such as biking, skiing, nature and fitness trails

4) Sewered residential developments

5) Unsewered (single family) residential development only on existing lots of

record on the effective date of this Ordinance

2.3 Conditional Uses

The following uses are conditional uses within Groundwater Protection Overlay District A. Uses not listed here are to be considered prohibited uses.

1) Commercial uses served by municipal sanitary sewer

2.4 Prohibited Uses

The following uses are prohibited uses within the Groundwater Protection Overlay District A. These uses are prohibited based on the high probability that activities routinely associated with these uses (storage, use, and handling of potential pollutants) will cause groundwater contamination. Uses not listed are not considered permitted uses.

1) Underground storage tanks of any size

1) Septage and/or sludge spreading

2) Animal waste landspreading

3) Animal waste facilities

4) Animal confinement facilities

5) Gas stations

6) Vehicle repair establishments, including auto body repair

7) Printing and duplicating businesses

8) Any manufacturing or industrial businesses

9) Bus or truck terminals

10) Repair shops

11) Landfills or waste disposal facilities

12) Wastewater treatment facilities

13) Spray wastewater facilities

14) Junk yards or auto salvage yards

15) Bulk fertilizer and/or pesticide facilities

16) Asphalt products manufacturing

17) Dry cleaning business

18) Salt storage

19) Electroplating facilities

20) Exterminating businesses

21) Paint and coating manufacturing

22) Hazardous and/or toxic materials storage

23) Hazardous and/or toxic waste facilities

24) Radioactive waste facilities

25) Recycling facilities

26) Cemeteries

2.5 Existing Uses

Where any of the uses listed above exist within Groundwater Protection Overlay District A on the effective date of this ordinance, owners of these facilities will be allowed to upgrade the facilities to facilitate or enhance groundwater protection. Plans for the proposed upgrade must be approved by the Plan Commission and Common Council, and appropriate permit issued by the City Inspection Department, prior to any work being initiated. Expansion of the prohibited use will not be allowed.

3.0 Groundwater Protection Overlay District B – Five Year Time of Travel

3.1 Intent

A secondary portion of the Stevens Point and Whiting recharge areas to be protected is land which lies within the five year groundwater travel zone upgradient from the Stevens Point and Whiting well fields. The five year time of travel (TOT) for the Stevens Point well fields shown on the attached map and described as:

That part of Section 1, Township 23 North, Range 8 East, that part of Sections 2, 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, and 36, Township 24 North, Range 8 East, Town of Hull, that part of Section 34, Township 24 North, Range 8 East, Village of Park Ridge, that part of Section 2, Township 23 North, Range 8 East, Town of Plover, that part of Sections 7 and 18, Township 24 North, Range 9 East, Town of Sharon, that part of Sections 13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, and 36, Township 24 North, Range 8 East and that part of Section 2, Township 23 North, Range 8 East, City of Stevens Point, that part of Sections 19 and 30, Township 24 North, Range 9 East, Town of Stockton, Portage County, Wisconsin, described as follows:

Beginning at the southwest corner of said Section 34, Township 24 North, Range 8 East; thence north along the west line of said Sections 34, 27, 22, 15, and 10 to the east-west quarter line of said Section 10; thence east along said quarter line to the west line of the East One-half of the Northwest Quarter of said Section 10; thence north along said west line and the west line of the East One-half of the Southwest Quarter of Section 3, Township 24 North, Range 8 East to the north line of the South One-half of the Southwest Quarter of said Section 3; thence east along said north line and the north line of the South One-half of the Southeast Quarter of said Section 3 and the north line of the South One-half of the Southwest Quarter and the Southeast Quarter of Section 2 to the west line of Section 1, Township 24 North, Range 8 East; thence south along

said west line to its southwest corner; thence east along the south line of said Section 1 to its southeast corner which is on the Range line between Range 8 East and Range 9 East; thence south along said Range line to the east-west quarter line of Section 7, Township 24 North, Range 9 East; thence east along said quarter line to the northeast corner of Government Lot 18 in said Section 7; thence south along the east line of said Government Lot 18 and the east line of Government Lot 19 in said Section to the north line of Section 18, Township 24 North, Range 9 East; thence east along said north line to the northeast corner of Government Lot 5 in said Section 18; thence south along the east line of said Government Lot 5 and the east line of Government Lots 8, 17, and 20 of said Section 18 and the east line of Government Lots 5, 8, 17, and 20 of Section 19, Township 24 North, Range 9 East and the east line of Government Lot 5 of Section 30, Township 24 North, Range 9 East, to the southeast corner of said Government Lot 5 of said Section 30; thence west along the south line of said Government Lot 5 and the south line of Government Lot 6 of said Section 30 to the Range line between Range 8 East and Range 9 East; thence south along said Range line to the southeast corner of Section 36, Township 24 North, Range 8 East; thence south along the east line of Section 1, Township 23 North, Range 8 East to the north line of the South One-half of the Northeast Quarter of said Section 1; thence west along said north line and the north line of the South One-half of the Northwest Quarter of said Section 1 and the north line of the South One-half of the Northeast Quarter and the Northwest Quarter of Section 2, Township 23 North, Range 8 East to the west line of said Section 2; thence north along said west line to the south line of Section 35, Township 24 North, Range 8 East; thence west along said south line and the south line of Section 34 to the point of beginning and there terminating.

The five year time of travel (TOT) for the Whiting well fields shown on the attached map and described as: beginning at the intersection of Porter Rd. and Hoover Rd., then north along Hoover Rd. to the intersection with the Wisconsin Central Railroad Limited, then east along the Wisconsin Railroad tracks to the intersection with Eisenhower Rd., then south along Eisenhower Rd. to its intersection with Porter Rd., then west along Porter Rd., to the intersection with Hoover Rd. and there terminating. Land use restrictions within Groundwater Protection Overlay District B are less restrictive than in Overlay District A because of longer flow times and a greater potential for remediation, dilution and attenuation. Uses not listed as permitted or conditional uses are to be considered prohibited uses.

3.2 Permitted Uses

The following uses are permitted within Groundwater Protection Overlay District B.

1) All uses listed as permitted uses in Groundwater Protection Overlay District A

2) Sewered residential uses

3) Above ground petroleum product storage tanks up to 660 gallons

4) Basement heating fuel storage tanks

5) Commercial and/or industrial uses served by municipal sanitary sewer, except: underground storage tanks of any size, unsewered commercial and/or industrial development, septage and/or sludge spreading, animal waste facilities, Animal confinement facilities (except veterinary hospitals and clinics), gas stations and oil change businesses, bus or truck terminals, landfills, wastewater treatment facilities, spray wastewater facilities, auto salvage yards, bulk fertilizer and/or pesticide

facilities, asphalt products manufacturing, dry cleaning facilities, electroplating facilities, exterminating shops, paint and coating manufacturing, hazardous and/or toxic materials storage, hazardous and/or toxic waste facilities, radioactive waste facilities, garage and vehicular towing, or public and municipal maintenance garage.

6) Unsewered (single family) residential uses

3.3 Design Standards

The following standards and requirements shall apply to all uses permitted within Wellhead Protection Overlay District Zone B.

1) Minimum lot size for unsewered residential uses shall be two acres, except for; a) existing lots of record on the effective date of this Ordinance and b) developments which will be served by municipal sewer within five years of the approval of the development. In order to provide for efficiently serving these developments with municipal sewer, lots smaller than two acres can be approved, provided that sufficient land area will be maintained in an undeveloped state such that no more than one residence is allowed for each two acres of the overall development.

2) All commercial and industrial uses are allowed a maximum of 50% of the lot area to be maintained in manicured lawn or grass. However, the area of the lot in manicured lawn or grass shall not exceed the area of impervious surfaces on the lot.

3) Sewered residential uses are allowed to have a maximum area of manicured lawn or grass as shown below:

Lot Area	Lawn Area (square feet)
16,000 sq ft	6,000
½ Acre	8,000
¾ acre	11,000
1 acre	14,000
1 ½ acres	20,000
2 acres	26,000

4) Maximum lawn areas for lot sizes not listed shall be based on the average percentage of lawn area allowed on the two nearest lot sizes listed.

5) Unsewered residential uses are allowed to have a maximum area of manicured lawn or grass as shown below:

Lot Area	Lawn Area (square feet)
2 acres	8,000
3 acres	21,000
4 acres	31,000
5 acres	44,000

6) Maximum lawn areas for lot sizes not listed shall be based on a weighted average of the percentage of lawn area allowed on the two nearest lot sizes listed.

7) Natural vegetative covers, not requiring the use of pesticides or fertilizers after initial establishment are encouraged as an alternative to manicured lawn or grass.

8) All petroleum storage tanks shall provide leak proof containment not less than 125% of the tank volume, except basement heating fuel storage tanks.

9) All storm drainage shall be retained on site or discharged to a municipally operated storm drain. If retained on site, storm water shall be discharged to settling ponds where it will percolate through at least six inches of topsoil. Use of drywells or other subsurface drains for stormwater drainage is prohibited.

10) Pesticide and fertilizer storage is permitted at the location of retail sales of these products, provided that the products are delivered in retail quantity containers and no repackaging and/or mixing is done on site.

11) Pesticide and fertilizer storage is permitted at the location of agricultural use of these products.

3.4 Conditional Uses

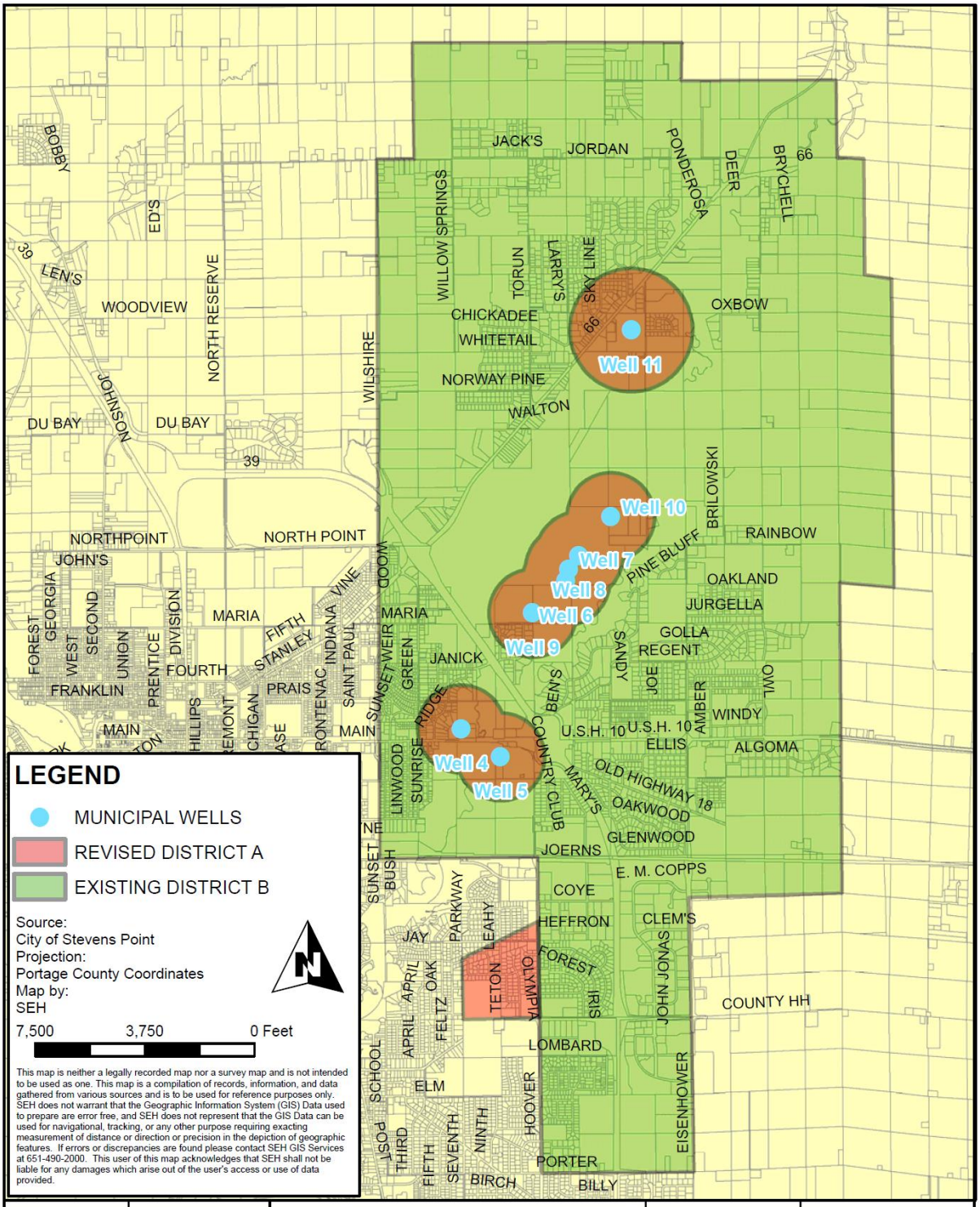
The following uses may be permitted on a case-by-case basis, providing adequate groundwater protection and monitoring measures, as determined by the Stevens Point Plan Commission and Common Council, are instituted.

1) All other uses, which are not permitted uses listed above, but are uses allowed within the underlying zoning district.

3.5 Existing Uses

Where any prohibited use existed within Groundwater Protection Overlay District B on the effective date of this ordinance, owners of these facilities will be allowed to upgrade the facilities to facilitate or enhance groundwater protection. Plans for the proposed upgrade must be approved by the Plan Commission and Common Council, and appropriate permit issued by the City Inspection Department, prior to any work being initiated. Expansion of the prohibited use will not be allowed.

4.0 Map



SEH	425 WEST WATER STREET SUITE 300 APPLETON, WI 54911-6058 PHONE: (920) 380-2800 FAX: (920) 380-2801 www.sehinc.com	***STEVENS POINT WATER UTILITY*** ***WELL NO. 11 WELLHEAD*** ***PROTECTION PLAN***	PROJECT: STEPT 107037 DATE: FEB 2012	**GROUNDWATER PROTECTION OVERLAY DISTRICTS**

SECTION II: This ordinance shall take effect upon passage, publication, and the signing.

Approved: _____

Andrew J. Halverson, Mayor

Attest: _____

John Moe, City Clerk

Dated: March 19, 2012
Adopted: March 19, 2012
Published: March 23, 2012

Well No. 11 Wellhead Protection Plan

Stevens Point, Wisconsin

SEH No. STEPT 107037

February 2012

SEH

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Well No. 11 Wellhead Protection Plan

Prepared for the City of Stevens Point, Wisconsin

1.0 Introduction

Wisconsin Department of Natural Resources (WDNR) and U.S. Environmental Protection Agency (USEPA) rules require that new municipal wells in Wisconsin have a WDNR-approved Wellhead Protection Plan (WHPP).

The purpose of a WHPP is to minimize the risk of contamination of public groundwater supplies by assessing and managing activities in the land area around the well. This WHPP details the type of groundwater supply sources, identifies the recharge areas and groundwater flow direction, and outlines a Wellhead Protection Area (WHPA) for the City of Stevens Point new Municipal Well 11 (MW-11).

Requirements for WHPPs are defined by *Wisconsin Administrative Code* § NR 811.12(6). WHPPs shall include:

1. Identification of groundwater flow direction
2. Identification of zone of influence
3. Identification of recharge area
4. Identification and assessment of potential contamination sources
5. Establishment of a well head protection area (WHPA)
6. Public education program for well head protection
7. Water conservation program
8. Contingency plan
9. Management plan

Wellhead protection plans were previously developed for the City's currently operating municipal wells. The MW-11 site is shown on Figure 1, "Site Location". The new MW-11 is a horizontal collector well and was constructed to a depth of 105 feet in the sand and gravel aquifer in May 2010. Eight horizontal laterals extend from the well caisson into the sand and gravel aquifer, ranging in length from 150 feet to 180 feet. Test-Well 11 (TW-11) was constructed in August of 2008, at the same site as MW-11, and is planned to be abandoned. Additional MW-11 and TW-11construction details along with other City of Stevens Point municipal well information are contained in Appendix A, "Municipal Well Data".

2.0 Purpose

This report provides a contaminant source inventory (CSI), details the type of groundwater supply sources, identifies the recharge areas and groundwater flow direction, and outlines a Wellhead Protection Area (WHPA) for the City of Stevens Point new Municipal Well 11 (MW-11).

The WHPA boundaries are calculated from factors such as well pumping rates; and aquifer characteristics such as hydraulic conductivity, transmissivity, porosity, aquifer thickness, horizontal hydraulic gradient and groundwater flow direction. The purpose in identifying the WHPA is to assist the City in protecting the areas surrounding the new MW-11 site from contaminants.

3.0 Background

The City of Stevens Point currently utilizes seven municipal wells to provide safe drinking water to a service population of approximately 26,400 residents. Daily production from all municipal wells averages 5.57 million gallons per day (mgd) with yearly water production of approximately 2.03 billion gallons per year.

The Stevens Point Water Utility uses seven groundwater wells, Well Nos. 4-10. Well Nos. 1-3 were abandoned in 1979, ten years after the construction of Well Nos. 6-9.

Well Nos. 4 and 5 were constructed in 1960 and 1966, respectively, in the Iverson Park well field. A water treatment plant was constructed in 2000 to treat Well No. 4 due to its historically high iron content above the secondary drinking water standard of 0.3 mg/L. Well No. 5 is treated with fluoride, chlorine and polyphosphate at the wellhead. Shortly after the construction of Well No. 5, Well Nos. 6-9 were constructed in the Airport well field in 1969. Well No. 10 was constructed in the Airport Well Field in 1995. Wells Nos. 6-10 are treated at the Airport Water Treatment Station with gas chlorine, fluoride, and polyphosphate chemical feed equipment. Treatment is required due to a history of manganese levels above both the Secondary Drinking Water Standard of 0.05 mg/L and EPA health advisory level of 0.3 mg/L in Well Nos. 6 and 7. The Airport Water Treatment Station was constructed in 2006.

In 2004, a 0.75 MG water tower was constructed to supplement the storage capacity of the City's existing 1 MG water tower constructed in 1956.

To meet the immediate and future water needs of its residents, the City commissioned the construction of Well No. 11, completing it in 2010.

Table 1 summarizes the City of Stevens Point's wells and treatment plant connections and shows the year each well was constructed.

Table 1
Wells and Treatment

Well Number	Discharge/Treatment Location	Year Constructed
4	Well 4 WTP	1960
5	Water System	1966
6	Airport Water Treatment Station	1969
7	Airport Water Treatment Station	1969
8	Airport Water Treatment Station	1969
9	Airport Water Treatment Station	1969
10	Airport Water Treatment Station	1995
11	Well 11 WTP	2010

The Stevens Point water system complies with WDNR regulations for municipal water systems, including providing an annual Consumer Confidence Report to its customers and WDNR, employing licensed water system operators, and collecting and analyzing WDNR specified water quality samples. In addition, WDNR conducts an annual inspection of the water system.

The following persons are the contacts for the City of Stevens Point Wellhead Protection Plan.

3.1 Wellhead Protection Manager

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4.0 Water Supply Profile

4.1 Introduction

The new MW-11 is located approximately 760 feet southeast of STH 66 and 460 feet west of the intersection of Plover Heights Road and River View Road in Portage County. The City originally obtained the well site property from the Stevens Point Boy Scouts of America. Layne-Northwest, Pewaukee, Wisconsin (Layne) performed detailed aquifer testing in 2008 for well pumping capacity and lithologic documentation and analysis. Locations of the TW-11 and MW-11 site are shown on Figure 2, "Site Detail".

MW-10 is the closest municipal well to the MW-11 site and is located approximately 6,800 feet to the south in Section 23, T24N, R8E, Portage County, Wisconsin. MW-10 and MW-11 are shown on Figure 1, "Site Location." MW-10 is completed in the sand and gravel aquifer to a depth of 90 feet. Additional MW-10 details are contained in Appendix A, "Municipal Well Data."

4.2 Water Resources

The Plover River is located approximately 1,800 feet east (downgradient) of the subject site as identified in GIS contour data provided by Portage County. There are no wetland resources located within 1,000 feet of the site.

While the Plover River area may influence the groundwater flow field of MW-11, recharge to the groundwater was not considered in calculating the WHPA. This approach is conservative, providing a larger WHPA than if the river were considered.

4.3 Regional and Local Geology

The subject site is characterized by brown sand with scarce amounts of gravel. Fine to medium sand, trace amounts of fine gravels, and trace silts occur beneath the thin surficial soil unit and extend approximately 69 feet below the ground surface (bgs). Below this, there are significantly higher amounts of gravel with well graded sand and trace silt found. (Detailed Aquifer Study, 2008).

4.4 Regional and Local Hydrogeology

The City of Stevens Point lies within the Glacial Paleozoic – Central Sand Plain Hydrogeologic District of Wisconsin (Zaporozec, 1985). The aquifer that was used for Well 11 is a sand and gravel aquifer known as the sand plain province. This province is characterized by a flat land surface with a thick layer of sand and gravel deposits, which are frequently over 100 feet deep. Wells in this aquifer generally have excellent yields, some exceeding 1,000 gallons per minute.

MW-11 is located on a generally flat area with a general slope to the southeast, toward the Plover River as shown in Figure 2. The water table at the subject site is approximately 28 feet bgs in alluvial sand and gravels. The effective aquifer thickness is estimated to be 39 feet (Detailed Aquifer Study, 2008) with a total estimated aquifer thickness of 80 feet. MW-11 was designed to draw water from eight laterals with a total lineal footage of 1,240 feet of screened sand and gravel, installed at 97 feet bgs.

Multiple-rate pump testing results indicated that with pumping rates varying from approximately 3,015 gpm to 9,210 gpm, the observed 2-hour specific capacity values ranged from 1,396 gallons per minute per foot of drawdown (gpm/ft) to 1,226 gpm/ft. The observed drawdown for the constant rate test (9,050 gpm for 72 hours) was 717 gpm/ft. The

transmissivity from the constant test pumping indicated an approximate value of 398,000 gpd/ft, which is consistent with the transmissivity value of 400,000 gpd/ft, which was determined during the detailed aquifer testing of the site. The hydraulic conductivity is approximately 5000 gpd/ft^2 for the sand and gravel aquifer, as determined during the detailed aquifer study for the site. Pumping test details and interpretations are included in the Ranney Report, "Collector Well 11 Installation Documentation and Performance Test Report" (2010) and also in the "Detailed Aquifer Study Boy Scout Property" report (2008).

Groundwater flow direction and horizontal hydraulic gradient were assessed from static water elevations and the surface water elevation of the nearby Plover River. Groundwater is interpreted to flow from northwest to southeast toward the Plover River. The horizontal hydraulic gradient of the water table aquifer is approximately 0.0013 ft/ft (Collector Well 11 Installation Documentation, 2010). There are no known groundwater divides in the area.

The sand and gravel aquifer is a viable source for public water supplies in the Stevens Point area. Daily pumping volumes from the pumping test indicate the sand and gravel aquifer could sustain up to 13 MGD and supply the City's water demand.

5.0 Contaminant Source Inventory

This section assesses the Contaminant Source Inventory (CSI) conducted for MW-11. Specifically, the well location has been assessed for likelihood of pollution from land surface sources within ½ mile of the subject site.

A CSI for the subject site was performed in December 2007 by SEH (Well Site Investigation Report, 2008), and is summarized in Appendix B. Three potential contamination sources occur within ½ mile of the site. The report results further indicate no ch. NR 811 Wis. Adm. Code setback issues with potential contamination sources at the MW-11 location.

6.0 Aquifer Vulnerability and Water Quality

The vulnerability of an aquifer is evaluated by the ability of geologic materials to restrict downward migration of contaminants to the saturated zone. A variety of factors can be used to evaluate aquifer vulnerability. These factors include:

- Depth to groundwater
- Soil types and attenuation
- Confining layers
- Aquifer material
- Recharge potential
- Vadose zone
- Unsaturated zone materials

The sand and gravel aquifer at the subject site is likely recharged by infiltration of rainwater through thin soil covers. Therefore, the sand and gravel aquifer is interpreted to be hydrologically connected to the surficial soils above it. Although the subsurface soils in the subject site are of low risk for contamination, the aquifer vulnerability is considered low to moderate based on limited surface activities on the property and surrounding area.

Water quality in the sand and gravel aquifer was assessed at the MW-11 site in August 2010. Water samples were collected near the conclusion of the MW-11 pumping test and forwarded to Northern Lakes Service, Inc. (Crandon, Wisconsin) for Safe Drinking Water Act parameter analysis. Based on a review of the laboratory water quality analysis, Chloroform was detected in the Well 11 water samples at 0.18 micrograms per liter (µg/l) (Collector Well 11 Performance Test Report, 2010). The 0.18 µg/L result is above the limit of detection but less than the limit of quantification and is considered less than certain. None of the other regulated VOCs were detected at or above the limits of detection. VOC occurrences in groundwater are characteristic of leaking petroleum storage tank or surface spill impacts where petroleum compounds have been released to the environment. The measured radium levels were well below the MCL of 5.0 picocuries per liter (pCi/L). No regulated SOCs were detected in the MW-11 water samples.

MW-11 sampling results indicated levels of dissolved manganese of 0.130 mg/l, which exceeds the secondary drinking water standard of 0.05 mg/l. The dissolved iron concentration was 0.053 mg/l, which is below the secondary drinking water standard of 0.3 mg/l. Nitrate concentrations at MW-11 were detected by the laboratory; however the measured level of 2.1 mg/l is significantly below the primary drinking water standard of 10 mg/l and should not be a water quality concern based on the analytical results.

7.0 Wellhead Protection Delineation Assessment

7.1 Introduction

WHPA delineation references used during the assessment include methodologies and calculations contained in the WDNR publication, "A Template for Preparing Wellhead Protection Plans for Municipal Wells" (WDNR, 2000), and the United States Environmental Protection Agency publication, "Wellhead Protection: A Guide for Small Communities" (EPA, 1993). An explanation of how the aquifer parameters necessary for the wellhead protection area calculation were selected is provided below.

7.2 Aquifer Parameter Assessment

7.2.1 Transmissivity

Transmissivity is a measure of the amount of water that can be transmitted horizontally by the fully-saturated thickness of an aquifer under a given hydraulic gradient. Aquifer transmissivity is estimated using the equation:

$T = K \times b$, where

T = Transmissivity (gpd/ft)
K = Hydraulic conductivity (gpd/ft^2)
b = Saturated thickness of the aquifer (ft)

Instead of estimating the transmissivity using the equation above, MW-11 pumping test time/drawdown data were used for the transmissivity assessment of the sand and gravel aquifer using the Cooper-Jacob straight line method. An average transmissivity value of approximately 400,000 gpd/ft was determined based on the distance-drawdown analysis. The distance-drawdown graphs are included in Appendix C.

7.2.2 Hydraulic Conductivity

Hydraulic conductivity describes the rate water can move through an aquifer and was assessed from the MW-11 pumping test. A hydraulic conductivity value of 5,000 gpd/ft^2 was determined from the pump testing.

7.2.3 Aquifer Thickness

The MW-11 depth to the water table yielded an aquifer thickness of approximately 80 feet in MW-11. The MW-11 partially penetrates the aquifer, as the sand and gravel aquifer extends to bedrock a depth greater than 160 feet.

7.2.4 Storativity

A storativity value of 0.3 determined from the MW-11 test pumping performed by Ranney (Ranney Collector Wells, 2008). The storativity value of 0.3 reflects an unconfined aquifer and correlates with the previous groundwater flow study done by Mechenich and Kraft.

7.2.5 Horizontal Hydraulic Gradient

Static water table elevations recorded from MW-11 and the surface water elevation from the nearby Plover River was used in calculating the horizontal hydraulic gradient. A horizontal hydraulic gradient of 0.0013 ft/ft was used in the WHPA delineations (Ranney Collector Wells, 2010). A southeasterly groundwater flow direction is suggested from the data, which correlates with the previous groundwater flow study done by Mechenich and Kraft.

7.3 Aquifer Recharge

The sand and gravel aquifer likely experiences higher rates of recharge where it occurs near the ground surface. Recharge also likely occurs in a vertical direction from the surface to the aquifer in the subject site area but at lower rates. Precipitation events in these drainage areas cause infiltration to the underlying soils, and evapotranspiration to plants occurring in surficial soils. For purposes of the WHPA delineation, no recharge rate was input into the calculation formula.

7.4 WHPA Delineations

The WHPA delineation identifies the land area which should be managed to prevent contamination of the well. The MW-11 pumping test provides the aquifer parameters which are necessary for calculation of the zone of influence (ZOI), the recharge area, and an effective WHPA delineation.

7.4.1 Zone of Influence

The Zone of Influence (ZOI) delineation was calculated for the MW-11 well site investigation. The ZOI was assessed at MW-11 using the Theis nonequilibrium equation (Driscoll, 1989) assuming 30 days of continuous pumping at the anticipated final pumping rate (9,000 gpm) with no recharge and a drawdown depth of one foot. The MW-11 ZOI at 30 days continuous pumping is 3,900 feet as shown on Figure 3. Supporting documentation is included in Appendix C, "WHPA Delineation Calculations."

7.4.2 Recharge Area

The MW-11 recharge area is the total land area contributing water to the well. The Uniform Flow equation (EPA, 1993) was used for assessment of the MW-11 recharge area with the calculation contained in Appendix C. The calculated recharge area for MW-11 extends 2,000 feet downgradient (XL) to 6,200 feet either side of the direct upgradient flow line (YL), assuming a pumping rate of 9,000 gpm for 12 hours per day. The recharge area extends northwesterly from the well site as shown on Figure 3.

7.4.3 Two and Five Year Time of Travel Delineations

The WHPA delineation for MW-11 is a requirement of ch. NR 811.12 Wis. Adm. Code. The Time of Travel (TOT) for groundwater captured by MW-11 is calculated from the groundwater velocity equation with a time factor applied. The two-year TOT for MW-11 that can be used to determine the Groundwater Protection Overlay District A for the City's Wellhead Protection Ordinance is 2,100 feet, as shown on Figure 3. The MW-11 WHPA area calculated for the five-year TOT is 5,300 feet as shown on Figure 3. Supporting calculations are included in Appendix C.

7.4.4 Establishment of WHPA

The establishment of a WHPA for the City of Stevens Point Well 11 is planned using the five-year time of travel delineation within the recharge area of the well. The five-year time of travel delineation was calculated under non-pumping conditions. The recharge area was calculated using the Uniform Flow Equation based on a pump rate of 9,000 gpm for 12 hours per day. The WHPA for MW-11 is shown on Figure 4.

8.0 Public Education

The WHPP will be presented at a City Utility Commission meeting. During the meeting, a discussion will emphasize why a WHPP is needed and how groundwater contamination can occur.

A Wellhead Protection map detailing the Groundwater Protection Overlay District for Well 11 area will be posted at the Utility office reception area. DNR pamphlets such as "Wellhead Protection: An Ounce of Prevention" (WR-308 92), and the EPA video "The Power to Protect" and other public education information will be available to the public at the Municipal Utilities office. The City's webpage also has information about the existing facilities, water quality, and other educational information. WHPP educational programs will be emphasized by the City. Wisconsin Rural Water Association's program can be used as a resource.

9.0 Water Conservation Plan

The City of Stevens Point was recognized by the Water Star Program for its water conservation efforts. The Water and Sewerage Department has identified ways to reduce unnecessary water use, such as using recycled wastewater to flush sewer mains, water lawns, and heat several facility buildings. In addition, the City provides water conservation tips on its website.

10.0 Contingency Plan

In the event that a wellhead protection area is compromised or that a well becomes contaminated, an Emergency Water Supply Plan will help ensure that Stevens Point residents will have an adequate supply of safe drinking water. The City of Stevens Point Contingency Plan includes three basic components: an early warning monitoring system, a system for reacting to events not detected by the early warning system, and a system for reacting if a well becomes contaminated.

The City has several monitoring wells that are part of its early warning monitoring system. All monitoring wells are sampled at least once per year. The monitoring wells are tested for all or some of the following: pesticides, general water quality parameters, nitrates, and volatile organic compounds.

The Portage County Emergency Management Office maintains the Portage County Emergency Operation Plan, which outlines aid and communication available to the City in the event of a disaster or emergency. The Portage County Emergency Management Office will notify the City in the event of a spill within the wellhead protection area and provide aid and assistance to the City of Stevens Point.

Should a well or wells become contaminated, an interconnection exists between the City of Stevens Point water system and the Village of Plover water system. During emergencies, additional water supply could be obtained through this connection.

An emergency chlorination plan for the water system is on file at the Utilities office**.**

Additional guidance may be found in the Statewide contingency plan, entitled "Annex N-Emergency Water Supply Plan of the Wisconsin Emergency Operations Plan".

Key coordinators and contacts for implementing the contingency plan are listed below:

<u>Emergency Contact Number</u>

Kim Halverson (City of Stevens Point Water/Sewage Director)

Phone: 715.345.5260

<u>Portage County Emergency Management/Risk Management</u>

Sandra Curtis (Director)

Phone: 715.346.1398

<u>Electric Utility</u>

Wisconsin Public Service (WPS)

Phone: 715.573.7815

<u>Local Department of Natural Resources Water Supply Contact</u>

Glenn Falkowski

Phone: 715.359.5284

Well Driller / Pump Installer

Company: Ranney Collector Wells

Contact: Matthew Reed

Phone: 614.888.6263

City of Stevens Point Fire Department

Emergency Services Phone: 911

Non-Emergency Services Phone: 715.344.1833

City of Stevens Point Police Department

Emergency Services Phone: 911

Non-Emergency Services Phone: 715.346.1500

Portage County Sheriff's Office

Emergency Services Phone: 911

Non-Emergency Services Phone: 715.346.1400

Hazardous Materials Spill Response Team (DNR)

Phone: 1.800.943.0003

City of Stevens Point Director of Public Works

Joel Lemke

Phone: 715.346.1561

Wisconsin State Patrol Wausau Post

Phone: 715.845.1143

11.0 Management Plan

Since MW-11 is near the City's limits with the Township of Hull, the City of Stevens Point is planning to coordinate with the Township of Hull on several components of their Wellhead Protection Plan. Since a majority of the wellhead protection area is outside the city limits, the primary focus of the plan will be on public education, improved City and Township ordinances, and direct coordination with the Township of Hull and Portage County to provide enforcement of existing regulations to limit risks posed by potential sources.

MW-11 is located on a 33 acre parcel owned by the City of Stevens Point. The City does not plan on purchasing any more land, but does plan to coordinate a protection plan for the remainder of the wellhead protection area including the recharge area within the 5-Year Time of Travel boundary with the Township of Hull and Portage County.

The City will undertake the activities listed in the Public Education section of this plan. Because the City does not have jurisdiction over much of the wellhead protection area, the City will contact the Township Board to enlist in their assistance in promoting the management plan. A Wellhead Protection education program should also be developed and reviewed on an annual basis by the City of Stevens Point.

The WHPP ordinance should be reviewed by the City and County in the future to ensure that minimum setback distances are followed. A copy of the pre-existing WHPP ordinance for the City of Stevens Point with recommended changes incorporating Well No. 11 is included in Appendix D, "Wellhead Protection Ordinances." Zoning ordinances will need to be revised to manage development using Wellhead Protection principles.

11.1 Separation Distances

The following separation distances as specified in s. NR 811.12(5)(d), Wis. Adm. Code, shall be maintained under the Management Plan:

1. Fifty feet between a well and a storm sewer main.

2. Two hundred feet between a well and any sanitary sewer main, sanitary sewer manhole, lift station, one or two family residential fuel oil tank. A lesser separation distance may be allowed for sanitary sewer mains where the sanitary sewer main is constructed of water main materials and joints and pressure tested in place to meet current American Waterworks Association (AWWA) C600 specifications. In no case may the separation distance between a well and a sanitary sewer main be less than 50 feet.

3. Four hundred feet between a well and a septic tank or soil adsorption unit receiving less than 12,000 gallons per day, a cemetery or a storm water drainage pond.

4. Six hundred feet between a well and any gasoline or fuel oil storage tank installation that has received written approval from the Wisconsin Department of Commerce (hereafter Commerce) or its designated agent under s. Comm 10.110, Wis. Adm. Code.

5. One thousand feet between a well and land application of municipal, commercial or industrial waste; boundaries of a land-spreading facility for spreading of petroleum-contaminated soil regulated under chapter NR 718 while that facility is in operation; industrial, commercial or municipal waste water lagoons or storage structures;

manure stacks or storage structures; and septic tanks or soil adsorption units receiving 12,000 gallons per day or more.

6. Twelve hundred feet between a well and any solid waste storage, transportation, transfer, incineration, air curtain destructor, processing, wood burning, one time disposal or small demolition facility; sanitary landfill; any property with residual groundwater contamination that exceeds chapter NR 140 enforcement standards that is shown on the Department of Natural Resources' geographic information system registry of closed remediation sites; coal storage area; salt or deicing material storage area; gasoline or fuel oil storage tanks that have not received written approval from Commerce or its designated agent under s. Comm 10.110, Wis. Adm. Code; bulk fuel storage facilities; and pesticide or fertilizer handling or storage facilities.

12.0 Limitations

A wide range of variability within an aquifer can affect the water-bearing characteristics of that aquifer, thus leading to regional as well as local variations in the geologic and hydrogeologic properties.

Within the scope of this project, it was not possible to account for all of the aquifer variability. The transmissivity of the aquifer is based on pumping test data interpretations. Other parameters such as aquifer thickness, specific storage, recharge, hydraulic conductivity, and porosity were obtained from published data or estimated from existing well conditions or published data.

The well head protection areas delineated by the WDNR methodologies discussed within the report are based on assumptions and limited data. They should be considered reliable approximations of the actual well head protection areas.

13.0 References

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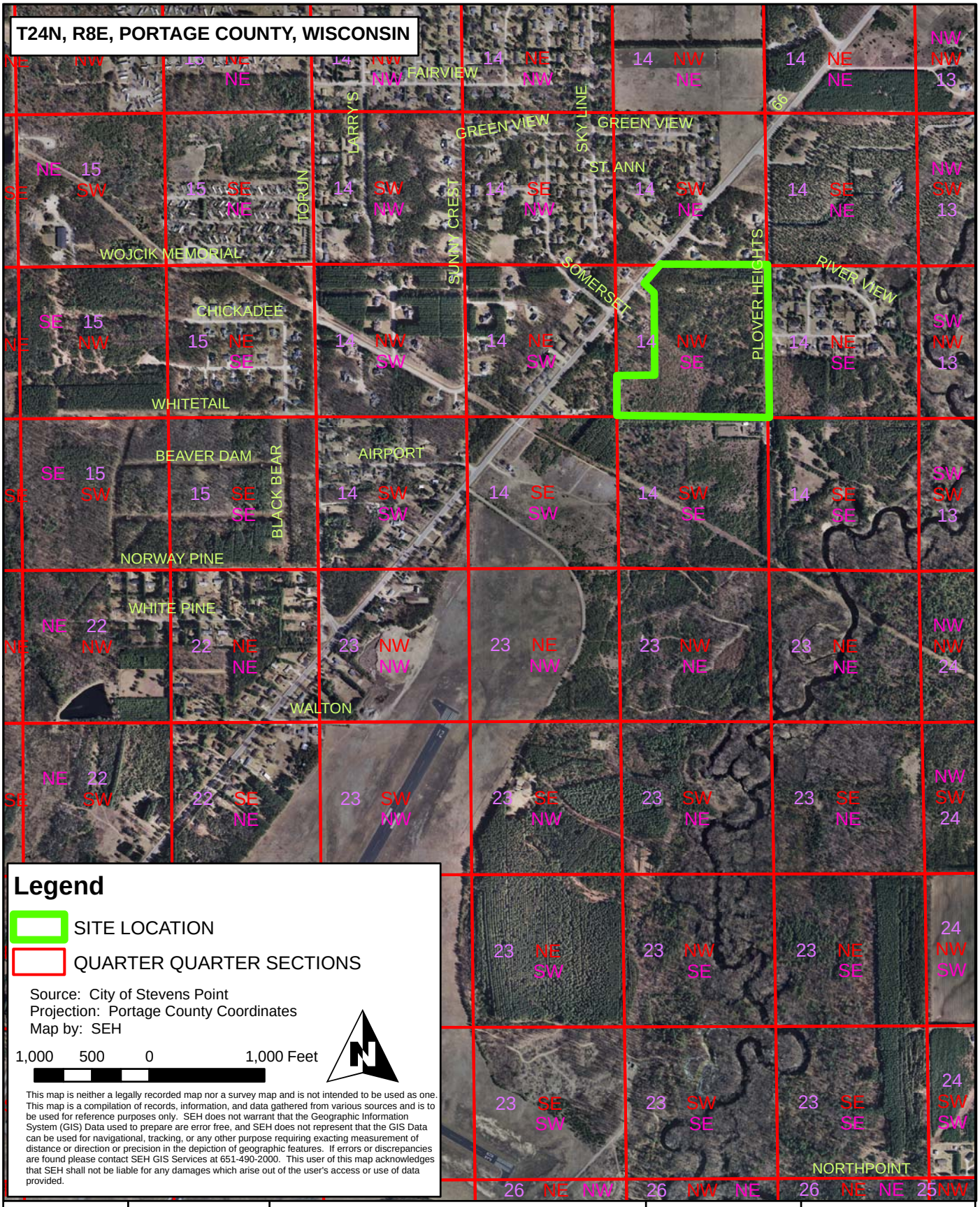
Figures

Figure 1 – Site Location

Figure 2 – Site Detail

Figure 3 – WHPA Delineation

Figure 4 – Wellhead Protection Area



Map Document: (P:\PT\S\STEPT\107037\Project\Wellhead Protection Plan\Figures\Figure 1 Site Location.mxd)

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SUITE 300
APPLETON, WI 54911-6058
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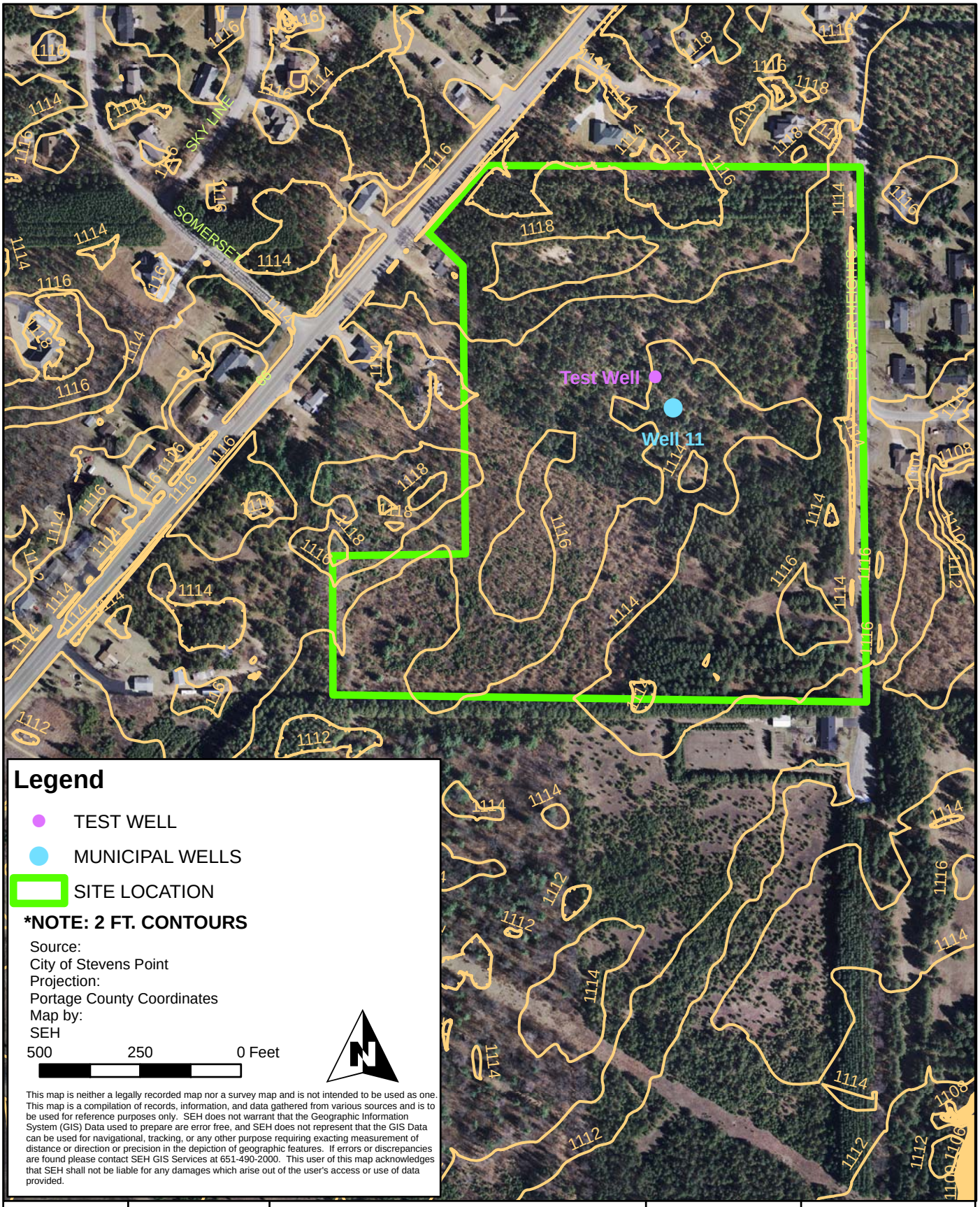
STEVENS POINT WATER UTILITY
WELL NO. 11 WELLHEAD PROTECTION PLAN

PROJECT: STEPT 107037

DATE: FEB 2012

FIGURE 1

SITE LOCATION



Legend

- TEST WELL
- MUNICIPAL WELLS
- SITE LOCATION

***NOTE: 2 FT. CONTOURS**

Source:
City of Stevens Point
Projection:
Portage County Coordinates
Map by:
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500 250 0 Feet

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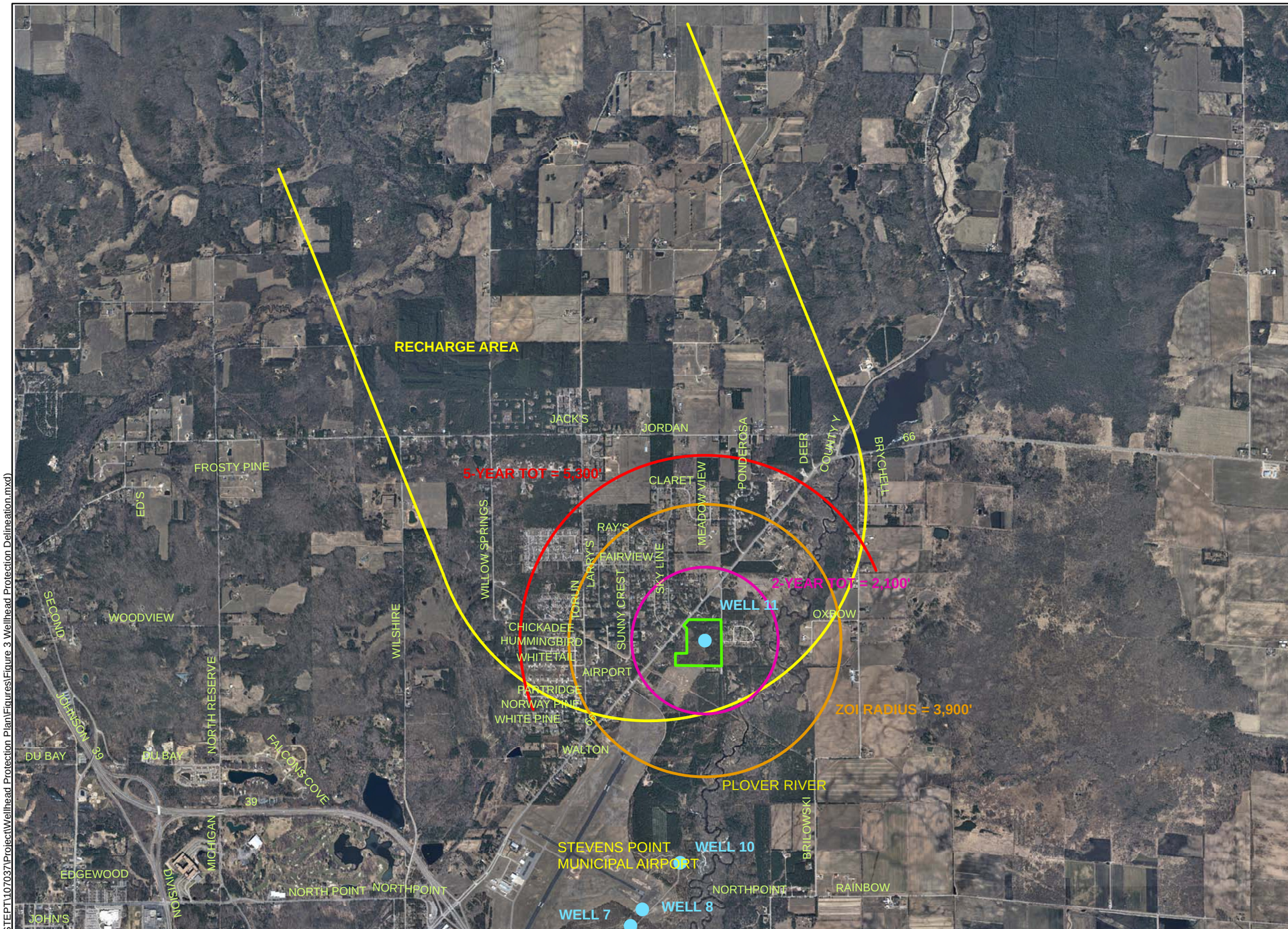
FIGURE 2

SITE DETAIL

Map Document: (P:\PT\S\STEPT\107037\Project\Wellhead Protection Plan\Figures\Figure 2 Site Detail.mxd)



LEGEND

- MUNICIPAL WELLS
- PROJECT SITE LOCATION
- ZONE OF INFLUENCE
- 2-YEAR TIME OF TRAVEL
- 5-YEAR TIME OF TRAVEL
- RECHARGE AREA

Source:
City of Stevens Point
Projection:
Portage County Coordinates
Map by:
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0 2,500 5,000 Feet

N

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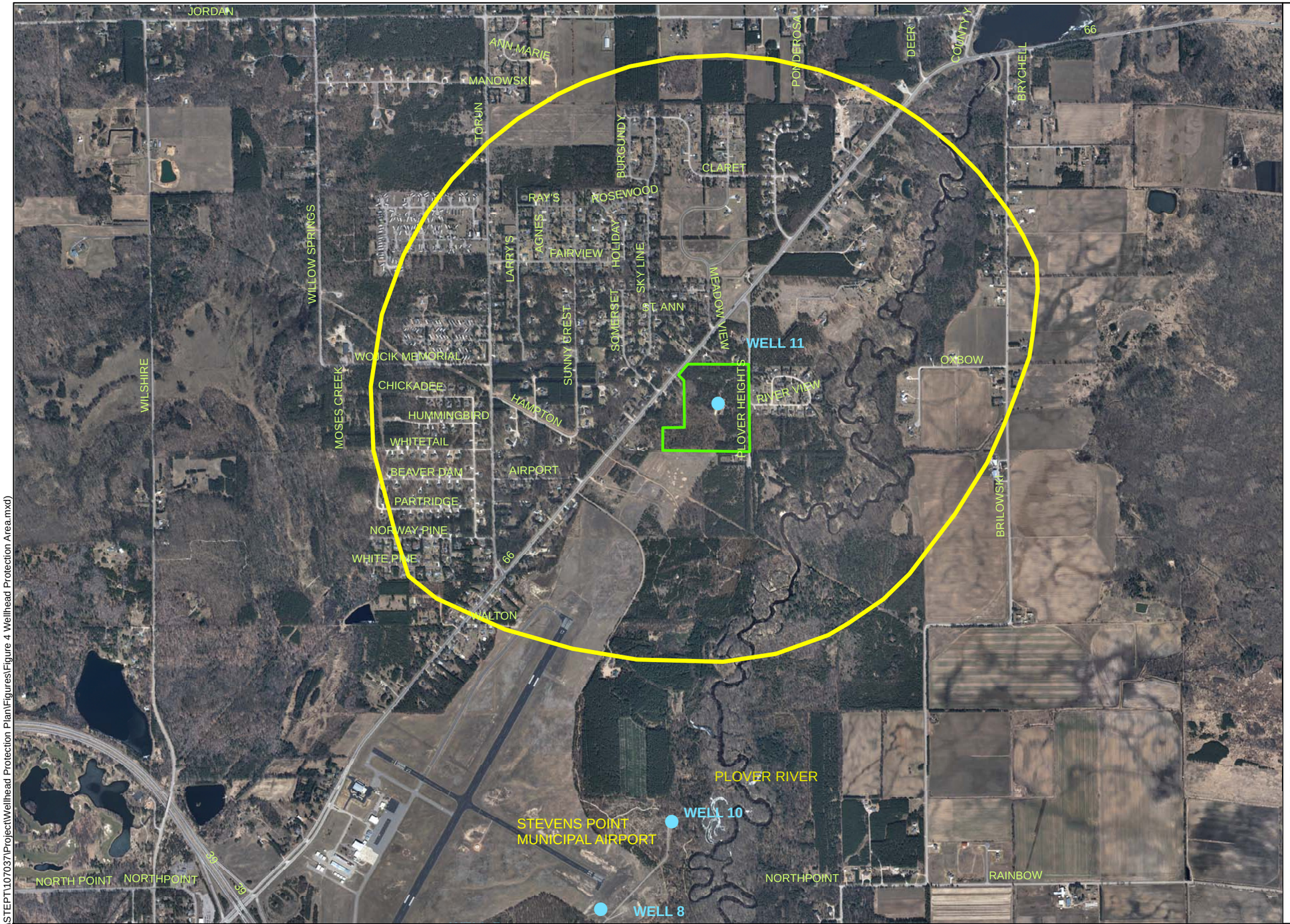
WELLHEAD PROTECTION DELINEATION

FIGURE 3



LEGEND

- MUNICIPAL WELLS
- PROJECT SITE LOCATION
- WELLHEAD PROTECTION AREA

Source:
City of Stevens Point
Projection:
Portage County Coordinates
Map by:
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0 1,250 2,500 Feet

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WELLHEAD PROTECTION AREA

FIGURE 4

Map Document: (P:\PT\S\STEPT\107037\ProjectWellhead Protection Plan\Figures\Figure 4 Wellhead Protection Area.mxd)

Appendix A

Municipal Well Data

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Entry Points and Water Sources

Help Reports

PWS ID 75001410 Stevens Point Waterworks

Source Id	Status	Well #	High Capacity Well #	Go to GRN	Availability	Type	Source
4	Active	BG709	84465	GRN	Permanent	Entry Point and Source	GROUND WATER SOURCE
5	Active	BG710	84466	GRN	Permanent	Entry Point and Source	GROUND WATER SOURCE
6	Active	BG711	84467	GRN	Permanent	Source	GROUND WATER SOURCE
7	Active	BG712	84468	GRN	Permanent	Source	GROUND WATER SOURCE
8	Active	BG713	84469	GRN	Permanent	Source	GROUND WATER SOURCE
9	Active	BG714	84470	GRN	Permanent	Source	GROUND WATER SOURCE
10	Active	LG796	2019	GRN	Permanent	Source	GROUND WATER SOURCE
200	Active				Permanent	Entry Point	PERMANENT GROUND WATER ENTRY POINT
11	New, not yet in service	WQ159		GRN	Permanent	Entry Point and Source	GROUND WATER SOURCE

Records 1 to 9 of 9

- **Return Links**
  - Entry Points and Water Sources
  - DNR Drinking Water System

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Well Construction Reports

Help Reports

WI Unique Well No:	LG796	**High Capacity Well No:**	2019
Hi Cap Well:	Yes	**Hi Cap Property:**	
County Well Location:		**DNR Region:**	West Central
County:	Portage	**Muni Type:**	C
Municipality:	STEVENS POINT WI	**Tax Parcel No:**	
Completion Date:	09/09/1994 **mm/dd/yyyy**	**DNR Received Date:**	09/25/1996
Status:	New Well	**Original Year:**	
Replacement Reason:	WATER SUPPLY	**Previous WI Well No:**	
Replacement WI Well No:		**Well Construction Type:**	Other
Other Const. Type:		**Category:**	Municipal/Community
Well Depth:	87 **ft**	**# Services:**	
Facility Type:	WATER BOARD	**Highest Point on Property:**	Yes
In Floodplain:	Yes	**Rotary - Mud Circulation:**	
Rotary - Air:		**Rotary - Foam:**	
Reverse Rotary:		**Cable Tool Bit:**	
Cable Bit Diameter:	**in**	**Temp Outer Casing:**	
Temp Casing Diameter:	**in**	**Temp Casing Removed:**	
Why not removed?:		**Other Drilling method:**	Yes
Other Drilling Description:	DUG CAISSON	**Screen Diameter:**	12 **inches**
Screen Description:	STAINLESS STEEL 75 TO 175SLOT	**Screen From:**	81 **feet**
Screen To:	**feet**	**Sealant Method:**	
Static Water level:	25.6 feet Below Ground	**Pumping level:**	30.7 **feet**
Pumping at:	4390	**Pumping units:**	Minutes
For:	73 **Hour(s)**	**Well Starting Depth:**	0 inches Above Ground
Developed:	Yes	**Disinfected:**	Y

Capped:	Yes	**Proper Seal:**	
Seal Description:		**Contractor Signed on:**	09/17/1996
Rig Operator Signed on:		**Geologic Log Number:**	
Common Well Number:	010	**Calculated Specific Capacity:**	8762
DNR Facility ID:	750014100	**Well Name:**	CITY WELL #10
Water Quality Comments:		**Water Quantity Comments:**	
Drilling Difficulty:		**Other Driller Comments:**	3 12" 158' LONG STAINLESS STEEL HORIZONTAL SCREENSRANGING FROM 75 TO 175 SLOT AT THE 81' DEPTH
Exception Area Comments:			

Distances in Feet to Nearest Objects

Type	Qualifier	Distance
Other		1500

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Drillhole Dimensions

Diameter (in)	From Depth (ft.)	To Depth (ft.)
19	0	87

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Casing & Liner

Diameter (inches)	Description	From Depth (ft.)	To Depth (ft.)
15	CONCRETE CAISSON DIAGRAM ATTACHED156 IN. INSIDE DIAMETER 192 IN. OUTSIDE DIAMETER	0	87

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Grout or Other Sealant Materials

No Records returned

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Geology

Geology	Geology Description	Driller's Description	USGS Code	From Depth (feet)	To Depth (feet)
-MGS	Medium; Gravel/Cobbles/Boulders/Stones; Sandy;	SAND WITH FINE MED GRAVEL		0	87

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Well Construction Reports

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WI Unique Well No:	BG709	**High Capacity Well No:**	84465
Hi Cap Well:		**Hi Cap Property:**	
County Well Location:		**DNR Region:**	West Central
County:	Portage	**Muni Type:**	C
Municipality:	STEVENS POINT	**Tax Parcel No:**	
Completion Date:	06/10/1960 **mm/dd/yyyy**	**DNR Received Date:**	
Status:	New Well	**Original Year:**	
Replacement Reason:		**Previous WI Well No:**	
Replacement WI Well No:		**Well Construction Type:**	Drilled
Other Const. Type:		**Category:**	Municipal/Community
Well Depth:	53 **ft**	**# Services:**	
Facility Type:		**Highest Point on Property:**	
In Floodplain:		**Rotary - Mud Circulation:**	
Rotary - Air:		**Rotary - Foam:**	
Reverse Rotary:		**Cable Tool Bit:**	
Cable Bit Diameter:	**in**	**Temp Outer Casing:**	
Temp Casing Diameter:	**in**	**Temp Casing Removed:**	
Why not removed?:		**Other Drilling method:**	
Other Drilling Description:		**Screen Diameter:**	26 **inches**
Screen Description:	SS SCREEN	**Screen From:**	32 **feet**
Screen To:	53 **feet**	**Sealant Method:**	
Static Water level:	4.1 feet Below Ground	**Pumping level:**	27.8 **feet**
Pumping at:	2020	**Pumping units:**	Minutes
For:	12 **Hour(s)**	**Well Starting Depth:**	inches
Developed:		**Disinfected:**	
Capped:		**Proper Seal:**	

Seal Description:		**Contractor Signed on:**	
Rig Operator Signed on:		**Geologic Log Number:**	PT399
Common Well Number:	004	**Calculated Specific Capacity:**	85.2
DNR Facility ID:	750014100	**Well Name:**	HWY 10 & 51 WELL #4
Water Quality Comments:		**Water Quantity Comments:**	
Drilling Difficulty:		**Other Driller Comments:**	ADD'L DRILLHOLE OF 84" FROM 10' TO 20'-PUMP CAPACITY IS 1850 GPM
Exception Area Comments:			

Distances in Feet to Nearest Objects

No Records returned

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Drillhole Dimensions

Diameter (in)	From Depth (ft.)	To Depth (ft.)
90	0	10
78	20	32
72	32	45
66	45	53

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Casing & Liner

Diameter (inches)	Description	From Depth (ft.)	To Depth (ft.)
38	0.250 STEEL PIPE	3	30
26	0.3125 STEEL PIPE	3	32

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Grout or Other Sealant Materials

Kind of Sealing Material	From Depth (ft.)	To Depth (ft.)	Amount	Units
CEMENT	0	27.5		

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Geology

Geology	Geology Description	Driller's Description	USGS Code	From Depth (feet)	To Depth (feet)
--S-	Sand;	SAND		0	29
--Y-	Sand & Gravel;	GRAVEL @ SAND		29	53

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Samples

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WI Unique Well No:	BG710	**High Capacity Well No:**	84466
Hi Cap Well:		**Hi Cap Property:**	
County Well Location:		**DNR Region:**	West Central
County:	Portage	**Muni Type:**	C
Municipality:	STEVENS POINT	**Tax Parcel No:**	
Completion Date:	11/09/1966 **mm/dd/yyyy**	**DNR Received Date:**	
Status:	New Well	**Original Year:**	
Replacement Reason:		**Previous WI Well No:**	
Replacement WI Well No:		**Well Construction Type:**	Drilled
Other Const. Type:		**Category:**	Municipal/Community
Well Depth:	70 **ft**	**# Services:**	
Facility Type:		**Highest Point on Property:**	
In Floodplain:		**Rotary - Mud Circulation:**	
Rotary - Air:		**Rotary - Foam:**	
Reverse Rotary:		**Cable Tool Bit:**	
Cable Bit Diameter:	**in**	**Temp Outer Casing:**	
Temp Casing Diameter:	**in**	**Temp Casing Removed:**	
Why not removed?:		**Other Drilling method:**	
Other Drilling Description:		**Screen Diameter:**	16 **inches**
Screen Description:	#80 SLOT SCREEN	**Screen From:**	53 **feet**
Screen To:	70 **feet**	**Sealant Method:**	
Static Water level:	28.5 feet Below Ground	**Pumping level:**	52.5 **feet**
Pumping at:	1400	**Pumping units:**	Minutes
For:	18 **Hour(s)**	**Well Starting Depth:**	inches
Developed:		**Disinfected:**	
Capped:		**Proper Seal:**	
Seal Description:		**Contractor Signed on:**	
Rig Operator Signed on:		**Geologic Log Number:**	
Common Well Number:	005	**Calculated Specific Capacity:**	58.3
DNR Facility ID:	750014100	**Well Name:**	HWY 10 & 51 WELL #5
Water Quality Comments:		**Water Quantity Comments:**	
Drilling Difficulty:		**Other Driller Comments:**	PUMP CAPACITY IS 1410 GPM

Exception Area Comments:

Distances in Feet to Nearest Objects

No Records returned

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Drillhole Dimensions

Diameter (in)	From Depth (ft.)	To Depth (ft.)
36	0	50
30	50	70

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Casing & Liner

Diameter (inches)	Description	From Depth (ft.)	To Depth (ft.)
36	WELDED 189 57LBS	0	50
30	WELDED 157 53LBS	2	50
16	WELDED 62 58LBS	2	53

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Grout or Other Sealant Materials

Kind of Sealing Material	From Depth (ft.)	To Depth (ft.)	Amount	Units
CEMENT	0	50		

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Geology

Geology	Geology Description	Driller's Description	USGS Code	From Depth (feet)	To Depth (feet)
-NS-	Fine; Sand;	FINE SAND		0	35
-AS-	Coarse; Sand;	COARSE SAND		35	50
--Y-	Sand & Gravel;	SAND @ GRAVEL		50	52
-AS-	Coarse; Sand;	COARSE SAND		52	70

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WI Unique Well No:	BG711	**High Capacity Well No:**	84467
Hi Cap Well:		**Hi Cap Property:**	
County Well Location:		**DNR Region:**	West Central
County:	Portage	**Muni Type:**	C
Municipality:	STEVENS POINT	**Tax Parcel No:**	
Completion Date:	09/01/1967 **mm/dd/yyyy**	**DNR Received Date:**	
Status:	New Well	**Original Year:**	
Replacement Reason:		**Previous WI Well No:**	
Replacement WI Well No:		**Well Construction Type:**	Drilled
Other Const. Type:		**Category:**	Municipal/Community
Well Depth:	90 **ft**	**# Services:**	
Facility Type:		**Highest Point on Property:**	
In Floodplain:		**Rotary - Mud Circulation:**	
Rotary - Air:		**Rotary - Foam:**	
Reverse Rotary:		**Cable Tool Bit:**	
Cable Bit Diameter:	**in**	**Temp Outer Casing:**	
Temp Casing Diameter:	**in**	**Temp Casing Removed:**	
Why not removed?:		**Other Drilling method:**	
Other Drilling Description:		**Screen Diameter:**	20 **inches**
Screen Description:	NOMINAL SS W/ LEAD PACKER	**Screen From:**	53.1 **feet**
Screen To:	90 **feet**	**Sealant Method:**	
Static Water level:	19.3 feet Below Ground	**Pumping level:**	26.3 **feet**
Pumping at:	2400	**Pumping units:**	Minutes
For:	12 **Hour(s)**	**Well Starting Depth:**	inches
Developed:		**Disinfected:**	
Capped:		**Proper Seal:**	
Seal Description:		**Contractor Signed on:**	
Rig Operator Signed on:		**Geologic Log Number:**	PT607
Common Well Number:	006	**Calculated Specific Capacity:**	341.4
DNR Facility ID:	750014100	**Well Name:**	WELL FIELD ROAD WELL #6
Water Quality Comments:		**Water Quantity Comments:**	

Drilling Difficulty:

Other Driller Comments: PUMP CAPACITY IS 2100 GPM

Exception Area Comments:

Distances in Feet to Nearest Objects

No Records returned

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Drillhole Dimensions

Diameter (in)	From Depth (ft.)	To Depth (ft.)
38	0	15
30	15	55
20	55	90

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Casing & Liner

Diameter (inches)	Description	From Depth (ft.)	To Depth (ft.)
30	BLACK A53 GR B WELDED 0.312 WALL	1	55
20	OD BLACK A53 GR B WELDED 0.375 WALL	1.9	54

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Grout or Other Sealant Materials

Kind of Sealing Material	From Depth (ft.)	To Depth (ft.)	Amount	Units
NEAT CEMENT	0	51		
CHLORINATED SAND	51	54		

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Geology

Geology	Geology Description	Driller's Description	USGS Code	From Depth (feet)	To Depth (feet)
--S-	Sand;	SAND		0	45
--G-	Gravel/Cobbles/Boulders/Stones;	GRAVEL		45	80
-MS-	Medium; Sand;	SAND		80	85

--G-	Gravel/Cobbles/Boulders/Stones;	GRAVEL		85	90

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Hi Cap Well:		**Hi Cap Property:**	
County Well Location:		**DNR Region:**	West Central
County:	Portage	**Muni Type:**	C
Municipality:	STEVENS POINT	**Tax Parcel No:**	
Completion Date:	11/01/1967 **mm/dd/yyyy**	**DNR Received Date:**	
Status:	New Well	**Original Year:**	
Replacement Reason:		**Previous WI Well No:**	
Replacement WI Well No:		**Well Construction Type:**	Drilled
Other Const. Type:		**Category:**	Municipal/Community
Well Depth:	85 **ft**	**# Services:**	
Facility Type:		**Highest Point on Property:**	
In Floodplain:		**Rotary - Mud Circulation:**	
Rotary - Air:		**Rotary - Foam:**	
Reverse Rotary:		**Cable Tool Bit:**	
Cable Bit Diameter:	**in**	**Temp Outer Casing:**	
Temp Casing Diameter:	**in**	**Temp Casing Removed:**	
Why not removed?:		**Other Drilling method:**	
Other Drilling Description:		**Screen Diameter:**	20 **inches**
Screen Description:	SS SCREEN	**Screen From:**	53.7 **feet**
Screen To:	85 **feet**	**Sealant Method:**	
Static Water level:	21.9 feet Below Ground	**Pumping level:**	30.6 **feet**
Pumping at:	2400	**Pumping units:**	Minutes
For:	23 **Hour(s)**	**Well Starting Depth:**	inches
Developed:		**Disinfected:**	
Capped:		**Proper Seal:**	
Seal Description:		**Contractor Signed on:**	
Rig Operator Signed on:		**Geologic Log Number:**	PT604
Common Well Number:	008	**Calculated Specific Capacity:**	275.9
DNR Facility ID:	750014100	**Well Name:**	WELL FIELD ROAD WELL #8
Water Quality Comments:		**Water Quantity Comments:**	

Drilling Difficulty:

Other Driller Comments: PUMP CAPACITY IS 2100 GPM

Exception Area Comments:

Distances in Feet to Nearest Objects

No Records returned

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Drillhole Dimensions

Diameter (in)	From Depth (ft.)	To Depth (ft.)
38	0	9
30	9	54.5
20	54.5	85

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Casing & Liner

Diameter (inches)	Description	From Depth (ft.)	To Depth (ft.)
30	0.312 STEEL WALL	1	50
20	0.375 STEEL WALL	1.5	54.5

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Grout or Other Sealant Materials

Kind of Sealing Material	From Depth (ft.)	To Depth (ft.)	Amount	Units
	0			
NEAT CEMENT	1	50		

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Geology

Geology	Geology Description	Driller's Description	USGS Code	From Depth (feet)	To Depth (feet)
--S-	Sand;	SAND		0	55
-NG-	Fine; Gravel/Cobbles/Boulders/Stones;	GRAVEL		55	65

-AS-	Coarse; Sand;	SAND		65	70
-NG-	Fine; Gravel/Cobbles/Boulders/Stones;	GRAVEL		70	80
-AS-	Coarse; Sand;	SAND		80	85

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WI Unique Well No:	WQ159	**High Capacity Well No:**	71545
Hi Cap Well:	Yes	**Hi Cap Property:**	Yes
County Well Location:		**DNR Region:**	West Central
County:	Portage	**Muni Type:**	T
Municipality:	HULL	**Tax Parcel No:**	
Completion Date:	10/19/2010 **mm/dd/yyyy**	**DNR Received Date:**	04/01/2011
Status:	New Well	**Original Year:**	
Replacement Reason:		**Previous WI Well No:**	
Replacement WI Well No:		**Well Construction Type:**	Other
Other Const. Type:	Collector Well	**Category:**	Municipal/Community
Well Depth:	106 **ft**	**# Services:**	
Facility Type:	Municipality	**Highest Point on Property:**	Yes
In Floodplain:	No	**Rotary - Mud Circulation:**	No
Rotary - Air:	No	**Rotary - Foam:**	No
Reverse Rotary:	No	**Cable Tool Bit:**	No
Cable Bit Diameter:	**in**	**Temp Outer Casing:**	No
Temp Casing Diameter:	**in**	**Temp Casing Removed:**	No
Why not removed?:		**Other Drilling method:**	No
Other Drilling Description:		**Screen Diameter:**	12 **inches**
Screen Description:	SS WIRE-WRAPPED 1240 FT OF 12 INCH SCREEN - 8 HORIZONTAL SCREENS	**Screen From:**	97 **feet**
Screen To:	97 **feet**	**Sealant Method:**	
Static Water level:	26.5 feet Below Ground	**Pumping level:**	39.1 **feet**
Pumping at:	9050	**Pumping units:**	Minutes
For:	72 **Hour(s)**	**Well Starting Depth:**	60 inches Above Ground
Developed:	Yes	**Disinfected:**	Y
Capped:	Yes	**Proper Seal:**	No

Seal Description:		**Contractor Signed on:**	10/19/2010
Rig Operator Signed on:		**Geologic Log Number:**	
Common Well Number:	011	**Calculated Specific Capacity:**	718.3
DNR Facility ID:	75001410	**Well Name:**	
Water Quality Comments:		**Water Quantity Comments:**	3 PUMPS: PUMP1 1750 GPM, PUMP2 1750 GPM, PUMP3 3500 GPM
Drilling Difficulty:		**Other Driller Comments:**	
Exception Area Comments:			

Distances in Feet to Nearest Objects

No Records returned

Download

Drillhole Dimensions

Diameter (in)	From Depth (ft.)	To Depth (ft.)
228	0	100
236	100	106

Download

Casing & Liner

Diameter (inches)	Description	From Depth (ft.)	To Depth (ft.)
228	Poured Concrete w/rebar	0	100
236	Poured Concrete w/cutting shoe and rebar	100	106

Download

Grout or Other Sealant Materials

Kind of Sealing Material	From Depth (ft.)	To Depth (ft.)	Amount	Units
	0			

Download

Geology

Geology	Geology Description	Driller's Description	USGS Code	From Depth (feet)	To Depth (feet)
-NS-	Fine; Sand;	Fine, Sand		0	70
--Y-	Sand & Gravel;	Sand & Gravel		70	92
--S-	Sand;	Sand		92	106

Download

Samples

No Records returned

Download

- Abandonment (0 Rows)
- Variances (0 Rows)
- Rehabilitation/Redevelopment (0 Rows)

Last Revised: 02/06/2012

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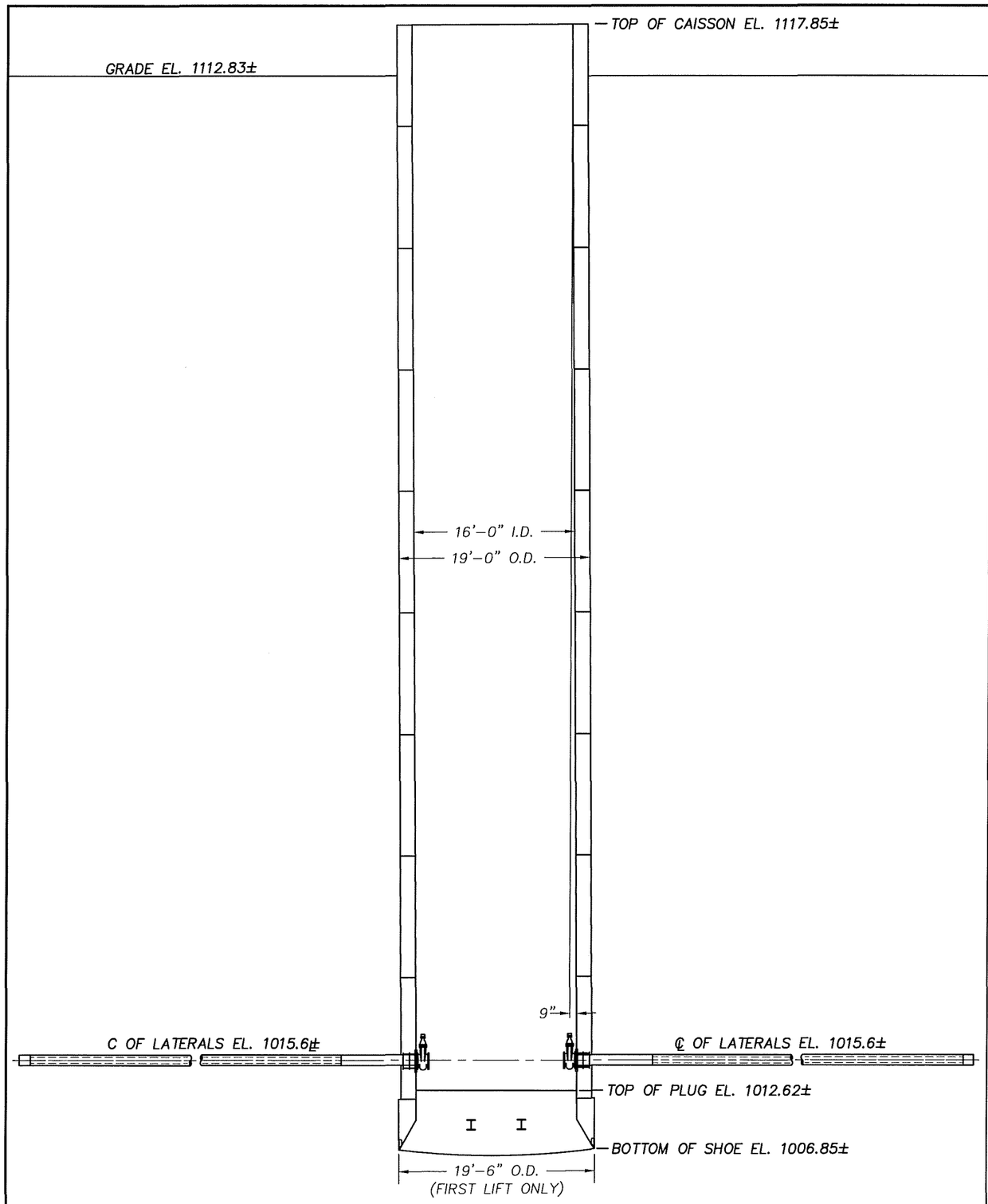
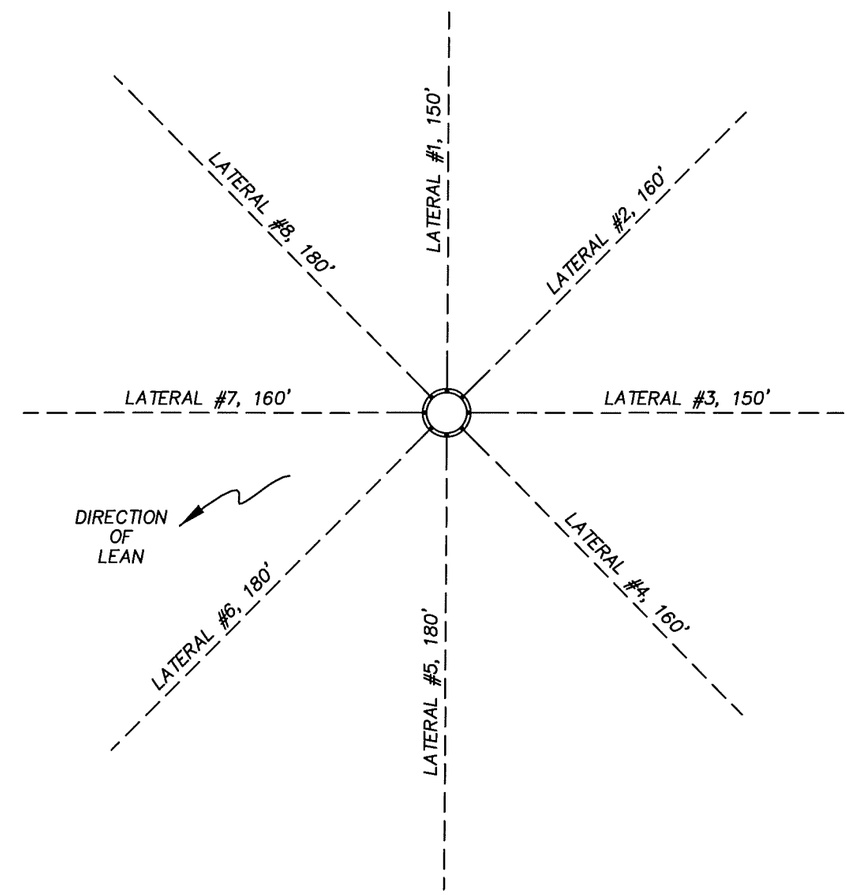


VERTICAL SECTION THRU CAISSON
SCALE: N.T.S.



PLAN VIEW
SCALE: 1"=60'

NORTH

RANNEY COLLECTOR WELLS
6360 HUNTLEY ROAD
COLUMBUS, OHIO 43229
(614) 888-6263 / FAX (614) 888-9208

SECTION & PLAN VIEW
COLLECTOR WELL 11
CITY OF STEVENS POINT, WISCONSIN

FILE NAME: 7378-13	DATE: 10/26/10	FIGURE
PROJECT #: 7378	SCALE: 1"=60'	2

Appendix B

Contaminant Source Inventory

Scale: 1" = Approx. 1000 feet

City property with saturated aquifer thicknesses > 80 feet

Nearby underground storage tanks (USTs) within one-half mile of Well 11

Federal Aviation Vortac Stevens Point Site within one-half mile of Well 11

BSP-1 test drilling location with 100 foot radius

SHORT ELLIOTT

SEH

Possible Contaminants

USTs NEAR NORTH WELL FIELD

STEVENS POINT WATER UTILITY

CITY OF STEVENS POINT, WISCONSIN

July 2011

STEPT 107037

P:\PT\S\STEPT\107037\Project\Wellhead Protection Plan\Figures\[Possible Contaminants.xls]Figure 2-4

Summary of Tanks Identified by Wisconsin Department of Commerce Storage Tank Database

Reg Object ID	327625	327592	327593
Bldg ID	121268	125464	125464
Bldg Name	RAYMOND L KARCH	ROBERT L BERARD	ROBERT L BERARD
Site Address	5441 HWY 66	1425 N PLOVER HEIGHTS RD	1425 N PLOVER HEIGHTS RD
City	STEVENS POINT	STEVENS POINT	STEVENS POINT
Zip	54481	54481	54481
County Name	PORTAGE	PORTAGE	PORTAGE
Municipality	STEVENS POINT	STEVENS POINT	STEVENS POINT
Owner	RAYMOND L KARCH	ROBERT L BERARD	ROBERT L BERARD
Object Type	UST	UST	UST
Tank Status Code	IU	IU	IU
Size Gallons	250	500	500
Tank Contents ID	Leaded Gasoline	Unleaded Gasoline	Unleadead Gasoline
Tank Occupancy Code	9	9	9
Tank Marketer	N	N	N
Site Fire Dept ID	4911	4911	4911
Land Owner Type	Private	Private	Private
Fed Reg UST	N	N	N

WDNR BRRTS on the Web

SINGER, JEFFREY J
Remediation Activity Details

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Activity Number and Name	Activity Type	Status
02-50-000357 SINGER, JEFFREY J	**ERP**	**CLOSED**

Facility ID	Start Date	Location Name View other activities at this Location	
NONE	01/01/1989	**SINGER JEFFREY J**	
Commerce Occurrence	End Date	Address View on Google Maps™ [Exit DNR]	Municipality
NONE	01/17/1996	#310 FAIRVIEW VILLAGE MHP	STEVENS POINT
EPA CERCLIS ID	Date of Last Action	County	DNR Region
NONE	01/17/1996	PORTAGE	WEST CNTRL
Agency Jurisdiction	Petroleum Risk	Other Location Info	Plot Size (Acres)
DNR-RR	UNKNOWN	NONE	UNKNOWN
Public Land Survey System Description		PDF Documents	DNR GIS Map Layers
SE 1/4 of the NE 1/4 of Sec 15, T24N, R08E			View on RR Sites Map

Comments

THERE ARE 2 REMEDIATION AND NO WASTE ACTIVITIES AT THIS LOCATION. CLICK ON THE LOCATION NAME LINK TO VIEW LOCATION DETAILS AND VIEW OTHER ACTIVITIES AT THIS LOCATION.

Characteristics

EPA NPL Site?	Commerce Tracked?	Eligible for PECFA Funds?	Above Ground Storage Tank?	Drycleaner?	Co-Contaminatior
No	**No**	**No**	**No**	**No**	No

Actions
Place Cursor Over Code to View Description

Date	Code	Name	Comment
01/01/1989	1	**Notification**	-
01/17/1996	11	**Activity Closed**	-

Impacts

Type	Comment
Soil Contamination	SOIL CONTAMINATION

Substances

Substance	Substance Type	Amount Released
Petroleum - Unknown Type	**Petroleum**	

Who
Project Manager: **TOM HVIZDAK** 473 GRIFFITH AVE WISCONSIN RAPIDS, WI 54494

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WDNR BRRTS on the Web

FIRKUS LF
Remediation Activity Details

PRINT | HELP | FEEDBACK

Activity Number and Name	Activity Type	Status
02-50-000047 FIRKUS LF	**ERP**	**OPEN**

Facility ID	Start Date	Location Name View other activities at this Location	
750032140	10/01/1978	**FIRKUS LF**	
Commerce Occurrence	End Date	Address View on Google Maps™ [Exit DNR]	Municipality
NONE	00/00/0000	STH 66	HULL
EPA CERCLIS ID	Date of Last Action	County	DNR Region
NONE	11/23/2004	PORTAGE	WEST CNTRL
Agency Jurisdiction	Petroleum Risk	Other Location Info	Plot Size (Acres)
DNR-RR	N/A	NONE	UNKNOWN
Public Land Survey System Description		PDF Documents	DNR GIS Map Layers
SW 1/4 of the SW 1/4 of Sec 12, T24N, R08E			View on RR Sites Map

Comments

THERE IS ONE REMEDIATION ACTIVITY AND 2 WASTE ACTIVITIES AT THIS LOCATION. CLICK ON THE LOCATION NAME LINK TO VIEW LOCATION DETAILS AND VIEW OTHER ACTIVITIES AT THIS LOCATION.

Characteristics

EPA NPL Site?	Commerce Tracked?	Eligible for PECFA Funds?	Above Ground Storage Tank?	Drycleaner?	Co-Contaminatior
No	No	No	No	No	No

Actions
Place Cursor Over Code to View Description

Date	Code	Name	Comment
10/01/1978	1	**Notification**	-
04/21/1986	99	**Miscellaneous**	PRELIMINARY ASSESSMENT
11/13/1990	99	**Miscellaneous**	SCREENING SITE INVESTIGATION
09/17/1991	99	**Miscellaneous/2**	SITE INSPECTION
06/03/1993	99	**Miscellaneous/2**	FINAL SITE SCREENING REPORT
09/29/1995	355	**Superfund: No Further Remedial Action Planned (NFRAP)**	FROM SUPERFUND DATABASE
04/19/1998	99	**Miscellaneous/5**	NEW PROPERTY OWNER - GREG KENOWSK
04/19/1998	99	**Miscellaneous/5**	SW CLOSED LANDFILL INSPECTION
11/23/2004	99	**Miscellaneous/7**	FILE REVIEW

Impacts	
Type	Comment
Soil Contamination	SOIL CONTAMINATION

Who	
Project Manager:	**LISA GUTKNECHT** 5301 RIB MOUNTAIN DR WAUSAU, WI 54401
Responsible Party:	**PERSONALLY IDENTIFIABLE INFORMATION IS IN FILE**

BRRTS data comes from various sources, both internal and external to DNR. There may be omissions and errors delays in updating new information. Please see the BOTW disclaimers page for more information.

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Release 2.5.3 : 02/12/2007

Facility Detail Report

Report an Error

FRS

Facility Name:	FED AV ADMIN VORTAC STEVENS PT
Location Address:	STEVENS POINT MUNICIPAL AIRPOR
Supplemental Address:	
City Name:	STEVENS POINT
State	WI
County Name:	PORTAGE
ZIP/Postal Code:	54481
EPA Region:	05
Congressional District Number:	
Legislative District Number:	
HUC Code:	
Federal Facility:	YES
Federal Agency:	FEDERAL AVIATION ADMINISTRATION
US Mexico Border Indicator:	NO
Tribal Land :	NO
Latitude:	44.554157
Longitude:	-89.521917
Method:	ADDRESS MATCHING-HOUSE NUMBER
Reference Point Description:	
Duns Number:	
Registry ID:	110006884639

Map this facility

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
RCRAINFO	WID988641940	CESQG	NOTIFICATION (RCRA)	07/22/1993	
WI-ESR	150368	STATE MASTER	WI-ESR		RCRAINFO-WID988641940 CESQG

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY MAILING ADDRESS	2077 AIRPORT DR	GREEN BAY	WI	54313	WI-ESR
OWNER	2021 AIRPORT DR	GREEN BAY	WI	54313	RCRAINFO
REGULATORY CONTACT	2077 AIRPORT DR	GREEN BAY	WI	54313	RCRAINFO
FACILITY MAILING ADDRESS	2077 AIRPORT DR	GREEN BAY	WI	54313	RCRAINFO
FACILITY MAILING ADDRESS	STEVENS POINT MUNICIPAL AIRPOR	STEVENS POINT	WI	54481	WI-ESR
HAZARDOUS WASTE: HAZARDOUS WASTE CONTACT	2077 AIRPORT DR	GREEN BAY	WI	54313	WI-ESR
	STEVENS POINT MUNICIPAL AIRPOR	STEVENS POINT	WI	54481	WI-ESR

NAICS Codes

No NAICS Codes returned.

SIC Codes

No SIC Codes returned.

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
REGULATORY CONTACT	TIM SZOBODY	4144975041	RCRAINFO	View
HAZARDOUS WASTE: HAZARDOUS WASTE CONTACT	TIM SZOBODY		WI-ESR	View

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
	FED AV ADMIN VORTAC STEVENS PT		WI-ESR	View
OWNER	FEDERAL AVIAITON ADMIN		RCRAINFO	View

Alternative Names

Alternative Name	Source of Data
FED AViation ADMINistration VORTAC STEVENS PoinT MUNICIPAL AIRPORT	NOTIFICATION (RCRA)

Query executed on: OCT-15-2007

Appendix C

Calculations

Recharge Area Calculation - Well MW-11
City of Stevens Point, Portage County
Aquifer: Sand and Gravel

Calculation of Recharge Area using WHPA equations
Using the Uniform Flow Equation:

XL = Q / 2 (3.14) Kb I , and YL = Q / 2 Kb I;

for the downgradient null point distance XL = Q / 2 (3.14) Kb I
for the upgradient null point width YL = Q / 2 Kb I

****

Assumptions:

Q = pumping discharge rate =	9,000	gpm	
Pumping hours per day	12	hours	
or, Q =	6,480,000	gpd	
T = transmissivity =	400,000	gpd/ft	(avg from Layne-Northwest Well Siting Rpt.)
I = static hydraulic gradient =	0.0013	ft/ft	

Boundary Limit (XL)	**XL =**	**2,000**	**feet**
Boundary Limit (YL)	**YL =**	**6,200**	**feet**

Zone of Influence - Municipal Well MW-11
City of Stevens Point
Aquifer: Sand and Gravel

Compute ZOI after 30 days of pumping from MW-11
Using the Theis non-equilibrium equation: **Meets Regulatory requirements for NR811.12(6)**

****

Assume:

Q = pumping rate	9000	gpm averaged over 24 hours
T = transmissivity	400,000	gpd/ft
t = time	30	days
s = drawdown	1.00	feet
S = storativity	0.3	dimensionless
r = radius (ZOI)		feet

****

The ZOI is calculated using the following Theis equations. Drawdown (s) is set to 1 foot and solving for W(u), then substituting the table value of u into the Equation 2 and solving for r

Using the equations:
Equation 1 = $s = 114.6*Q*W(u)/T$
Equation 2 = $u = 1.87*(r^2)*S/T*t$

****

Solving Equation 1 for W(u) = 0.39

from Driscoll, Appendix 9E, p. 921-923;

u = 0.719

Solving Equation 2 for ZOI radius from pumped well to observation point:

$u = 1.87*(r^2)*S/T*t$

rearranging, $r^2 = u*T*t/1.87*S$

$r^2 =$ 15,388,235 ft^2

ZOI radius = 3,900 ft at a drawdown of 1 foot

Reference: Driscoll, "Groundwater and Wells", pages 218-219

Calculation of 30 day, 1 year, 2 year and 5 Year Time of Travel to Well

Time of Travel Calculation - Municipal Well MW-11
City of Stevens Point
Aquifer: Sand and Gravel Aquifer

Parameter Conversion: Transmissivity to hydraulic conductivity:

T = k*b	where T =	400,000	gpd/ft	
	and b =	80	ft	
K =	5000.00	gpd/ft2	or,	
	670.00	ft/day		

Using the Velocity Equation: V = KI / Ne

****

Assume:

K = hydraulic conductivity	670.00	(ft/day)	from above
I = horizontal hydraulic gradient	0.0013	ft/ft	from Ranney report
Ne = effective porosity	0.3000	dimensionless	from Kraft modeling report
V = groundwater velocity	**2.90**	(ft/day)	

****

30 day time of Travel =	**90**	**feet**
1 Year Time of Travel =	**1,100**	**feet**
2 Year Time of Travel =	**2,100**	**feet**
5 Year Time of Travel =	**5,300**	**feet**

APPENDIX 9.E.

Values of *W(u)* Corresponding to Values of *u* for Theis Nonequilibrium Equation

N \ u	$N\times10^{-15}$	$N\times10^{-14}$	$N\times10^{-13}$	$N\times10^{-12}$	$N\times10^{-11}$	$N\times10^{-10}$	$N\times10^{-9}$	$N-10^{-8}$	$N\times10^{-7}$	$N\times10^{-6}$	$N\times10^{-5}$	$N\times10^{-4}$	$N\times10^{-3}$	$N\times10^{-2}$	$N\times10^{-1}$	N
1.0	33.9616	31.6590	29.3564	27.0538	24.7512	22.4486	20.1460	17.8435	15.5409	13.2383	10.9357	8.6332	6.3315	4.0379	1.8229	0.2194
1.1	33.8662	31.5637	29.2611	26.9585	24.6559	22.3533	20.0507	17.7482	15.4456	13.1430	10.8404	8.5379	6.2363	3.9436	1.7371	.1860
1.2	33.7792	31.4767	29.1741	26.8715	24.5689	22.2663	19.9637	17.6611	15.3586	13.0560	10.7534	8.4509	6.1494	3.8576	1.6595	.1584
1.3	33.6992	31.3966	29.0940	26.7914	24.4889	22.1863	19.8837	17.5811	15.2785	12.9759	10.6734	8.3709	6.0695	3.7785	1.5889	.1355
1.4	33.6251	31.3225	29.0199	26.7173	24.4147	22.1122	19.8096	17.5070	15.2044	12.9018	10.5993	8.2968	5.9955	3.7054	1.5241	.1162
1.5	33.5561	31.2535	28.9509	26.6483	24.3458	22.0432	19.7406	17.4380	15.1354	12.8328	10.5303	8.2278	5.9266	3.6374	1.4645	.1000
1.6	33.4916	31.1890	28.8864	26.5838	24.2812	21.9786	19.6760	17.3735	15.0709	12.7683	10.4657	8.1634	5.8621	3.5739	1.4092	.08631
1.7	33.4309	31.1283	28.8258	26.5232	24.2206	21.9180	19.6154	17.3128	15.0103	12.7077	10.4051	8.1027	5.8016	3.5143	1.3578	.07465
1.8	33.3738	31.0712	28.7686	26.4660	24.1634	21.8608	19.5583	17.2557	14.9531	12.6505	10.3479	8.0455	5.7446	3.4581	1.3098	.06471
1.9	33.3197	31.0171	28.7145	26.4119	24.1094	21.8068	19.5042	17.2016	14.8990	12.5964	10.2939	7.9915	5.6906	3.4050	1.2649	.05620
2.0	33.2684	30.9658	28.6632	26.3607	24.0581	21.7555	19.4529	17.1503	14.8477	12.5451	10.2426	7.9402	5.6394	3.3547	1.2227	.04890
2.1	33.2196	30.9170	28.6145	26.3119	24.0093	21.7067	19.4041	17.1015	14.7989	12.4964	10.1938	7.8914	5.5907	3.3069	1.1829	.04261
2.2	33.1731	30.8705	28.5679	26.2653	23.9628	21.6602	19.3576	17.0550	14.7524	12.4498	10.1473	7.8449	5.5443	3.2614	1.1454	.03719
2.3	33.1286	30.8261	28.5235	26.2209	23.9183	21.6157	19.3131	17.0106	14.7080	12.4054	10.1028	7.8004	5.4999	3.2179	1.1099	.03250
2.4	33.0861	30.7835	28.4809	26.1783	23.8758	21.5732	19.2706	16.9680	14.6654	12.3628	10.0603	7.7579	5.4575	3.1763	1.0762	.02844
2.5	33.0453	30.7427	28.4401	26.1375	23.8349	21.5323	19.2298	16.9272	14.6246	12.3220	10.0194	7.7172	5.4167	3.1365	1.0443	.02491
2.6	33.0060	30.7035	28.4009	26.0983	23.7957	21.4931	19.1905	16.8880	14.5854	12.2828	9.9802	7.6779	5.3776	3.0983	1.0139	.02185
2.7	32.9683	30.6657	28.3631	26.0606	23.7580	21.4554	19.1528	16.8502	14.5476	12.2450	9.9425	7.6401	5.3400	3.0615	.9849	.01918
2.8	32.9319	30.6294	28.3268	26.0242	23.7216	21.4190	19.1164	16.8138	14.5113	12.2087	9.9061	7.6038	5.3037	3.0261	.9573	.01686
2.9	32.8968	30.5943	28.2917	25.9891	23.6865	21.3839	19.0813	16.7788	14.4762	12.1736	9.8710	7.5687	5.2687	2.9920	.9309	.01482
3.0	32.8629	30.5604	28.2578	25.9552	23.6526	21.3500	19.0474	16.7449	14.4423	12.1397	9.8371	7.5348	5.2349	2.9591	.9057	.01305
3.1	32.8302	30.5276	28.2250	25.9224	23.6198	21.3172	19.0146	16.7121	14.4095	12.1069	9.8043	7.5020	5.2022	2.9273	.8815	.01149
3.2	32.7984	30.4958	28.1932	25.8907	23.5881	21.2855	18.9829	16.6803	14.3777	12.0751	9.7726	7.4703	5.1706	2.8965	.8583	.01013
3.3	32.7676	30.4651	28.1625	25.8599	23.5573	21.2547	18.9521	16.6495	14.3470	12.0444	9.7418	7.4395	5.1399	2.8668	.8361	.008939
3.4	32.7378	30.4352	28.1326	25.8300	23.5274	21.2249	18.9223	16.6197	14.3171	12.0145	9.7120	7.4097	5.1102	2.8379	.8147	.007891
3.5	32.7088	30.4062	28.1036	25.8010	23.4985	21.1959	18.8933	16.5907	14.2881	11.9855	9.6830	7.3807	5.0813	2.8099	.7942	.006970
3.6	32.6806	30.3780	28.0755	25.7729	23.4703	21.1677	18.8651	16.5625	14.2599	11.9574	9.6548	7.3526	5.0532	2.7827	.7745	.006160
3.7	32.6532	30.3506	28.0481	25.7455	23.4429	21.1403	18.8377	16.5351	14.2325	11.9300	9.6274	7.3252	5.0259	2.7563	.7554	.005448
3.8	32.6266	30.3240	28.0214	25.7188	23.4162	21.1136	18.8110	16.5085	14.2059	11.9033	9.6007	7.2985	4.9993	2.7306	.7371	.004820
3.9	32.6006	30.2980	27.9954	25.6928	23.3902	21.0877	18.7851	16.4825	14.1799	11.8773	9.5748	7.2725	4.9735	2.7056	.7194	.004267
4.0	32.5753	30.2727	27.9701	25.6675	23.3649	21.0623	18.7598	16.4572	14.1546	11.8520	9.5495	7.2472	4.9482	2.6813	.7024	.003779
4.1	32.5506	30.2480	27.9454	25.6428	23.3402	21.0376	18.7351	16.4325	14.1299	11.8273	9.5248	7.2225	4.9236	2.6576	.6859	.003349
4.2	32.5265	30.2239	27.9213	25.6187	23.3161	21.0136	18.7110	16.4084	14.1058	11.8032	9.5007	7.1985	4.8997	2.6344	.6700	.002969
4.3	32.5029	30.2004	27.8978	25.5952	23.2926	20.9900	18.6874	16.3848	14.0823	11.7797	9.4771	7.1749	4.8762	2.6119	.6546	.002633
4.4	32.4800	30.1774	27.8748	25.5722	23.2696	20.9670	18.6644	16.3619	14.0593	11.7567	9.4541	7.1520	4.8533	2.5899	.6397	.002336
4.5	32.4575	30.1549	27.8523	25.5497	23.2471	20.9446	18.6420	16.3394	14.0368	11.7342	9.4317	7.1295	4.8310	2.5684	.6253	.002073
4.6	32.4355	30.1329	27.8303	25.5277	23.2252	20.9226	18.6200	16.3174	14.0148	11.7122	9.4097	7.1075	4.8091	2.5474	.6114	.001841
4.7	32.4140	30.1114	27.8088	25.5062	23.2037	20.9011	18.5985	16.2959	13.9933	11.6907	9.3882	7.0860	4.7877	2.5268	.5979	.001635
4.8	32.3929	30.0904	27.7878	25.4852	23.1826	20.8800	18.5774	16.2748	13.9723	11.6697	9.3671	7.0650	4.7667	2.5068	.5848	.001453
4.9	32.3723	30.0697	27.7672	25.4646	23.1620	20.8594	18.5568	16.2542	13.9516	11.6491	9.3465	7.0444	4.7462	2.4871	.5721	.001291
5.0	32.3521	30.0495	27.7470	25.4444	23.1418	20.8392	18.5366	16.2340	13.9314	11.6289	9.3263	7.0242	4.7261	2.4679	.5598	.001148
5.1	32.3323	30.0297	27.7271	25.4246	23.1220	20.8194	18.5168	16.2142	13.9116	11.6091	9.3065	7.0044	4.7064	2.4491	.5478	.001021

Appendix 9.E. Continued

N \ u	$N\times10^{-15}$	$N\times10^{-14}$	$N\times10^{-13}$	$N\times10^{-12}$	$N\times10^{-11}$	$N\times10^{-10}$	$N\times10^{-9}$	$N\times10^{-8}$	$N\times10^{-7}$	$N\times10^{-6}$	$N\times10^{-5}$	$N\times10^{-4}$	$N\times10^{-3}$	$N\times10^{-2}$	$N\times10^{-1}$	N
5.2	32.3129	30.0103	27.7077	25.4051	23.1026	20.8000	18.4974	16.1948	13.8922	11.5896	9.2871	6.9850	4.6871	2.4306	.5362	.0009086
5.3	32.2939	29.9913	27.6887	25.3861	23.0835	20.7809	18.4783	16.1758	13.8732	11.5706	9.2681	6.9659	4.6681	2.4126	.5250	.0008086
5.4	32.2752	29.9726	27.6700	25.3674	23.0648	20.7622	18.4596	16.1571	13.8545	11.5519	9.2494	6.9473	4.6495	2.3948	.5140	.0007198
5.5	32.2568	29.9542	27.6516	25.3491	23.0465	20.7439	18.4413	16.1387	13.8361	11.5336	9.2310	6.9289	4.6313	2.3775	.5034	.0006409
5.6	32.2388	29.9362	27.6336	25.3310	23.0285	20.7259	18.4233	16.1207	13.8181	11.5155	9.2130	6.9109	4.6134	2.3604	.4930	.0005708
5.7	32.2211	29.9185	27.6159	25.3133	23.0108	20.7082	18.4056	16.1030	13.8004	11.4978	9.1953	6.8932	4.5958	2.3437	.4830	.0005085
5.8	32.2037	29.9011	27.5985	25.2959	22.9934	20.6908	18.3882	16.0856	13.7830	11.4804	9.1779	6.8758	4.5785	2.3273	.4732	.0004532
5.9	32.1866	29.8840	27.5814	25.2789	22.9763	20.6737	18.3711	16.0685	13.7659	11.4633	9.1608	6.8588	4.5615	2.3111	.4637	.0004039
6.0	32.1698	29.8672	27.5646	25.2620	22.9595	20.6569	18.3543	16.0517	13.7491	11.4465	9.1440	6.8420	4.5448	2.2953	.4544	.0003601
6.1	32.1533	29.8507	27.5481	25.2455	22.9429	20.6403	18.3378	16.0352	13.7326	11.4300	9.1275	6.8254	4.5283	2.2797	.4454	.0003211
6.2	32.1370	29.8344	27.5318	25.2293	22.9267	20.6241	18.3215	16.0189	13.7163	11.4138	9.1112	6.8092	4.5122	2.2645	.4366	.0002864
6.3	32.1210	29.8184	27.5158	25.2133	22.9107	20.6081	18.3055	16.0029	13.7003	11.3978	9.0952	6.7932	4.4963	2.2494	.4280	.0002555
6.4	32.1053	29.8027	27.5001	25.1975	22.8949	20.5923	18.2898	15.9872	13.6846	11.3820	9.0795	6.7775	4.4806	2.2346	.4197	.0002279
6.5	32.0898	29.7872	27.4846	25.1820	22.8794	20.5768	18.2742	15.9717	13.6691	11.3665	9.0640	6.7620	4.4652	2.2201	.4115	.0002034
6.6	32.0745	29.7719	27.4693	25.1667	22.8641	20.5616	18.2590	15.9564	13.6538	11.3512	9.0487	6.7467	4.4501	2.2058	.4036	.0001816
6.7	32.0595	29.7569	27.4543	25.1517	22.8491	20.5465	18.2439	15.9414	13.6388	11.3362	9.0337	6.7317	4.4351	2.1917	.3959	.0001621
6.8	32.0446	29.7421	27.4395	25.1369	22.8343	20.5317	18.2291	15.9265	13.6240	11.3214	9.0189	6.7169	4.4204	2.1779	.3883	.0001448
6.9	32.0300	29.7275	27.4249	25.1223	22.8197	20.5171	18.2145	15.9119	13.6094	11.3068	9.0043	6.7023	4.4059	2.1643	.3810	.0001293
7.0	32.0156	29.7131	27.4105	25.1079	22.8053	20.5027	18.2001	15.8976	13.5950	11.2924	8.9899	6.6879	4.3916	2.1508	.3738	.0001155
7.1	32.0015	29.6989	27.3963	25.0937	22.7911	20.4885	18.1860	15.8834	13.5808	11.2782	8.9757	6.6737	4.3775	2.1376	.3668	.0001032
7.2	31.9875	29.6849	27.3823	25.0797	22.7771	20.4746	18.1720	15.8694	13.5668	11.2642	8.9617	6.6598	4.3636	2.1246	.3599	.00009219
7.3	31.9737	29.6711	27.3685	25.0659	22.7633	20.4608	18.1582	15.8556	13.5530	11.2504	8.9479	6.6460	4.3500	2.1118	.3532	.00008239
7.4	31.9601	29.6575	27.3549	25.0523	22.7497	20.4472	18.1446	15.8420	13.5394	11.2368	8.9343	6.6324	4.3364	2.0991	.3467	.00007364
7.5	31.9467	29.6441	27.3415	25.0389	22.7363	20.4337	18.1311	15.8286	13.5260	11.2234	8.9209	6.6190	4.3231	2.0867	.3403	.00006583
7.6	31.9334	29.6308	27.3282	25.0257	22.7231	20.4205	18.1179	15.8153	13.5127	11.2102	8.9076	6.6057	4.3100	2.0744	.3341	.00005886
7.7	31.9203	29.6178	27.3152	25.0126	22.7100	20.4074	18.1048	15.8022	13.4997	11.1971	8.8946	6.5927	4.2970	2.0623	.3280	.00005263
7.8	31.9074	29.6048	27.3023	24.9997	22.6971	20.3945	18.0919	15.7893	13.4868	11.1842	8.8817	6.5798	4.2842	2.0503	.3221	.00004707
7.9	31.8947	29.5921	27.2895	24.9869	22.6844	20.3818	18.0792	15.7766	13.4740	11.1714	8.8689	6.5671	4.2716	2.0386	.3163	.00004210
8.0	31.8821	29.5795	27.2769	24.9744	22.6718	20.3692	18.0666	15.7640	13.4614	11.1589	8.8563	6.5545	4.2591	2.0269	.3106	.00003767
8.1	31.8697	29.5671	27.2645	24.9619	22.6594	20.3568	18.0542	15.7516	13.4490	11.1464	8.8439	6.5421	4.2468	2.0155	.3050	.00003370
8.2	31.8574	29.5548	27.2523	24.9497	22.6471	20.3445	18.0419	15.7393	13.4367	11.1342	8.8317	6.5298	4.2346	2.0042	.2996	.00003015
8.3	31.8453	29.5427	27.2401	24.9375	22.6350	20.3324	18.0298	15.7272	13.4246	11.1220	8.8195	6.5177	4.2226	1.9930	.2943	.00002699
8.4	31.8333	29.5307	27.2282	24.9256	22.6230	20.3204	18.0178	15.7152	13.4126	11.1101	8.8076	6.5057	4.2107	1.9820	.2891	.00002415
8.5	31.8215	29.5189	27.2163	24.9137	22.6112	20.3086	18.0060	15.7034	13.4008	11.0982	8.7957	6.4939	4.1990	1.9711	.2840	.00002162
8.6	31.8098	29.5072	27.2046	24.9020	22.5995	20.2969	17.9943	15.6917	13.3891	11.0865	8.7840	6.4822	4.1874	1.9604	.2790	.00001936
8.7	31.7982	29.4957	27.1931	24.8905	22.5879	20.2853	17.9827	15.6801	13.3776	11.0750	8.7725	6.4707	4.1759	1.9498	.2742	.00001733
8.8	31.7868	29.4842	27.1816	24.8790	22.5765	20.2739	17.9713	15.6687	13.3661	11.0635	8.7610	6.4592	4.1646	1.9393	.2694	.00001552
8.9	31.7755	29.4729	27.1703	24.8678	22.5652	20.2626	17.9600	15.6574	13.3548	11.0523	8.7497	6.4480	4.1534	1.9290	.2647	.00001390
9.0	31.7643	29.4618	27.1592	24.8566	22.5540	20.2514	17.9488	15.6462	13.3437	11.0411	8.7386	6.4368	4.1423	1.9187	.2602	.00001245
9.1	31.7533	29.4507	27.1481	24.8455	22.5429	20.2404	17.9378	15.6352	13.3326	11.0300	8.7275	6.4258	4.1313	1.9087	.2557	.00001115
9.2	31.7424	29.4398	27.1372	24.8346	22.5320	20.2294	17.9268	15.6243	13.3217	11.0191	8.7166	6.4148	4.1205	1.8987	.2513	.000009988
9.3	31.7315	29.4290	27.1264	24.8238	22.5212	20.2186	17.9160	15.6135	13.3109	11.0083	8.7058	6.4040	4.1098	1.8888	.2470	.000008948
9.4	31.7208	29.4183	27.1157	24.8131	22.5105	20.2079	17.9053	15.6028	13.3002	10.9976	8.6951	6.3934	4.0992	1.8791	.2429	.000008018
9.5	31.7103	29.4077	27.1051	24.8025	22.4999	20.1973	17.8948	15.5922	13.2896	10.9870	8.6845	6.3828	4.0887	1.8695	.2387	.000007185
9.6	31.6998	29.3972	27.0946	24.7920	22.4895	20.1869	17.8843	15.5817	13.2791	10.9765	8.6740	6.3723	4.0784	1.8599	.2347	.000006439

Appendix 9.E. Continued

N \ u	$N\times10^{-15}$	$N\times10^{-14}$	$N\times10^{-13}$	$N\times10^{-12}$	$N\times10^{-11}$	$N\times10^{-10}$	$N\times10^{-9}$	$N\times10^{-8}$	$N\times10^{-7}$	$N\times10^{-6}$	$N\times10^{-5}$	$N\times10^{-4}$	$N\times10^{-3}$	$N\times10^{-2}$	$N\times10^{-1}$	N
9.7	31.6894	29.3868	27.0843	24.7817	22.4791	20.1765	17.8739	15.5713	13.2688	10.9662	8.6637	6.3620	4.0681	1.8505	.2308	.000005771
9.8	31.6792	29.3766	27.0740	24.7714	22.4688	20.1663	17.8637	15.5611	13.2585	10.9559	8.6534	6.3517	4.0579	1.8412	.2269	.000005173
9.9	31.6690	29.3664	27.0639	24.7613	22.4587	20.1561	17.8535	15.5509	13.2483	10.9458	8.6433	6.3416	4.0479	1.8320	.2231	.000004637

NOTE: See page 218 for Theis equation and definitions of terms.

Values of $W(u)$ for u between 1×10^{-15} and 1×10^{-3} computed by R.G. Kazmann assisted by M.M. Evans, U.S. Geological Survey; values for u between 1×10^{-3} and 9.9 adapted from Tables of Exponential and Trigonometric Integrals.

From Water Supply Paper 887, U.S. Geological Survey, 1942.

Appendix D

Wellhead Protection Ordinance

CHAPTER 23

ZONING CODE

CITY OF STEVENS POINT

Adopted: February 19, 1979

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Any antenna support structure that has had no antenna mounted upon it for a period of successive days, or if the antennas mounted thereon are not operated for a period of 180 successive days, shall be considered abandoned, and the owner thereof shall remove such structure and any accompanying equipment enclosure within 90 days after the receipt of a notice from the City to do so. During such 90 days, the owner may apply, and for good reason, be granted an extension of time on such terms as the Director of Community Development shall determine. If such structure and equipment enclosure are not so removed, the city may seek and obtain a court order directing such removal and imposing a lien upon the real property upon which such structures are situated in an amount equal to the cost of removal. Any notice given under this section is subject to appeal to the City Council. In the event that more than one wireless communications service provider is using the support structure, then this provision shall not become effective until all users cease using such structure.

e) Wellhead Protection Overlay District

1.0 Purpose and Authority

The residents of the City of Stevens Point depend exclusively on groundwater for a safe drinking water supply. Certain land use practices and activities can seriously threaten or degrade groundwater quality. The purpose of this Wellhead Protection Ordinance is to institute land use regulations and restrictions to protect the City's municipal water supply and well fields, and to promote the public health, safety and general welfare of the residents of the City of Stevens Point.

Statutory authority of the City to enact these regulations was established by the Wisconsin Legislature in 1983, Wisconsin Act 410 (effective May 11, 1984), which specifically added groundwater protection to the statutory authorization for municipal planning and zoning to protect public health, safety and welfare.

1.1 Application of Regulations

The regulations specified in this Wellhead Protection Ordinance shall apply only to lands within 1,500 feet of the Stevens Point municipal wells (Cones of Depression), the two year Time of Travel (TOT), or within the five year ~~Time of Travel (~~TOT~~)~~ of these wells and which also lie within the City of Stevens Point corporate limits.

1.2 Definitions

(1) Aquifer. A saturated, permeable geologic formation that contains and will yield significant quantities of water.

(2) Cone of Depression. The area around a well, in which the water level has been lowered at least one tenth of a foot by pumping of the well. The Wisconsin Geological and Natural History Survey Special Report No. 10, entitled "Wellhead-Protection Districts in Wisconsin: An Analysis and Test

Applications", identified the Cone of Depression for the neighboring municipality of Whiting to be a radius of 1,422 feet. For ease of determination, the Cone of Depression ~~or Groundwater Protection Overlay District A~~ has been established as being 1,500 feet from the Stevens Point wells.

(3) Two Year Time of Travel (TOT). The Two Year TOT is the recharge area upgradient of the cone of depression, the outer boundary of which it is determined or estimated that groundwater and potential contaminants will take two years to reach a pumping well. The Two Year TOT for the Stevens Point well fields is calculated from the groundwater velocity equation with a time factor applied. The Two Year TOT calculations for Stevens Point Well 11 are found in the report entitled, "Well No. 11 Wellhead Protection Plan".

(~~3~~ 4) Five Year Time of Travel (TOT). The Five Year TOT is the recharge area upgradient of the cone of depression, the outer boundary of which it is determined or estimated that groundwater and potential contaminants will take five years to reach a pumping well. The Five Year TOT for the Stevens Point Well Nos. 4, 5, 6, 7, 8, 9, and 10 ~~well fields~~ is established based on flow path modeling contained in the report entitled "STEVENS POINT WISCONSIN CASE STUDY: Wellhead Protection Programs and Monitoring System Design". The Five Year TOT for Stevens Point Well 11 are found in the report entitled, "Well No. 11 Wellhead Protection Plan".

(~~4~~ 5)Recharge Area. Area in which water reaches the zone of saturation by surface infiltration and encompasses all areas or features that supply groundwater recharge to a well.

(~~5~~ 6)Well Field. A piece of land used primarily for the purpose of locating wells to supply a municipal water system.

2.0 Groundwater Protection Overlay District A – The areas defined herein as either the Cones of Depression (Wells No. 4, 5, 6, 7, 8, 9, and 10) or the Two Year TOT (Well No. 11).

2.1 Intent

The primary portion of the Stevens Point recharge areas to be protected is the land within 1,500 feet of the Stevens Point wells, known as Wells 4,5,6,7,8,9 and 10, and within the two year TOT for Well 11, as shown on the attached maps and of the Whiting well fields described as beginning at the intersection of County Trunk HH and Hoover Road, then north to the intersection of the Wisconsin Public Service power lines located approximately one-half mile north of the point of beginning, then southwest along the WPS power line to its intersection with Alder St., then south along Alder St. to the intersection with First St., then west along First St. to its intersection with April La., then south along April La. to its intersection with County Trunk Highway HH, then east along

County Trunk Highway HH to its intersection with Hoover Rd. and there terminating also shown on the attached map. These lands are subject to the most stringent land use and development restrictions because of close proximity to the wells and the corresponding high threat of contamination.

2.2 Permitted Uses

The following uses are permitted uses within Groundwater Protection Overlay District

A. Uses not listed here are to be considered prohibited uses.

1) Parks and playgrounds, provided there are no on-site waste disposal or fuel storage tank facilities

2) Wildlife areas

3) Nonmotorized trails, such as biking, skiing, nature and fitness trails

4) Sewered residential developments

5) Unsewered (single family) residential development only on existing lots of record on the effective date of this Ordinance

2.3 Conditional Uses

The following uses are conditional uses within Groundwater Protection Overlay District A. Uses not listed here are to be considered prohibited uses.

1) Commercial uses served by municipal sanitary sewer

2.4 Prohibited Uses

The following uses are prohibited uses within the Groundwater Protection Overlay District A. These uses are prohibited based on the high probability that activities routinely associated with these uses (storage, use, and handling of potential pollutants) will cause groundwater contamination. Uses not listed are not considered permitted uses.

1) Underground storage tanks of any size

2) Septage and/or sludge spreading

3) Animal waste landspreading

4) Animal waste facilities

5) Animal confinement facilities

6) Gas stations

7) Vehicle repair establishments, including auto body repair

8) Printing and duplicating businesses

9) Any manufacturing or industrial businesses

10) Bus or truck terminals

11) Repair shops

12) Landfills or waste disposal facilities

13) Wastewater treatment facilities

14) Spray wastewater facilities

15) Junk yards or auto salvage yards

16) Bulk fertilizer and/or pesticide facilities

17) Asphalt products manufacturing

18) Dry cleaning business

19) Salt storage

20) Electroplating facilities

21) Exterminating businesses

22) Paint and coating manufacturing

23) Hazardous and/or toxic materials storage

24) Hazardous and/or toxic waste facilities

25) Radioactive waste facilities

26) Recycling facilities

27) Cemeteries

2.5 Where any of the uses listed above exist within Groundwater Protection Overlay District A on the effective date of this ordinance, owners of these facilities will be allowed to upgrade the facilities to facilitate or enhance groundwater protection. Plans

for the proposed upgrade must be approved by the Plan Commission and Common Council, and appropriate permit issued by the City Inspection Department, prior to any work being initiated. Expansion of the prohibited use will not be allowed.

3.0 Groundwater Protection Overlay District B – Five Year Time of Travel

3.1 Intent

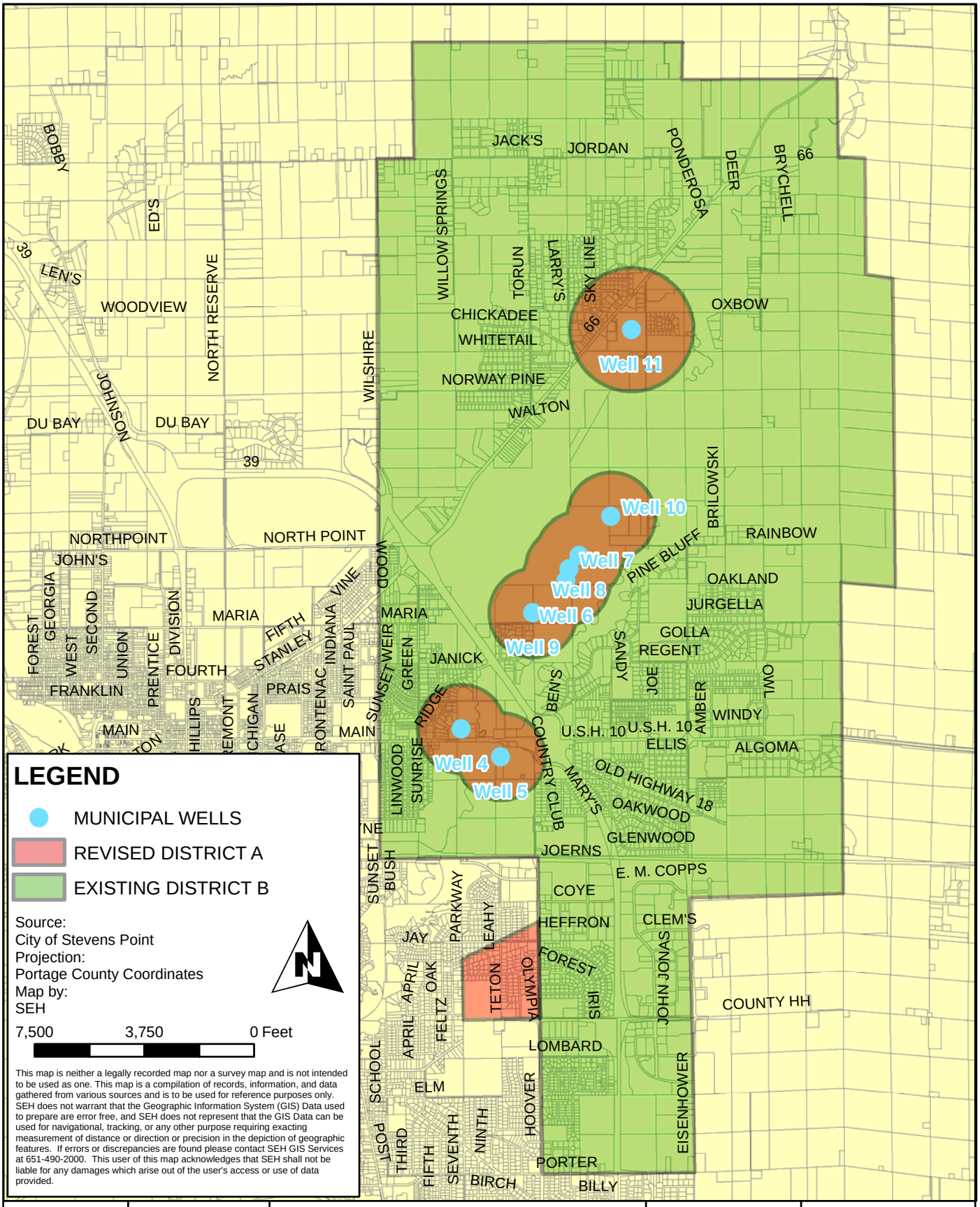
A secondary portion of the Stevens Point and Whiting recharge areas to be protected is land which lies within the five year groundwater travel zone upgradient from the Stevens Point and Whiting well fields. The five year time of travel (TOT) for the Stevens Point well fields shown on the attached map and described as:

That part of Section 1, Township 23 North, Range 8 East, that part of Sections 2, 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, and 36, Township 24 North, Range 8 East, Town of Hull, that part of Section 34, Township 24 North, Range 8 East, Village of Park Ridge, that part of Section 2, Township 23 North, Range 8 East, Town of Plover, that part of Sections 7 and 18, Township 24 North, Range 9 East, Town of Sharon, that part of Sections 13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, and 36, Township 24 North, Range 8 East and that part of Section 2, Township 23 North, Range 8 East, City of Stevens Point, that part of Sections 19 and 30, Township 24 North, Range 9 East, Town of Stockton, Portage County, Wisconsin, described as follows:

Beginning at the southwest corner of said Section 34, Township 24 North, Range 8 East; thence north along the west line of said Sections 34, 27, 22, 15, and 10 to the east-west quarter line of said Section 10; thence east along said quarter line to the west line of the East One-half of the Northwest Quarter of said Section 10; thence north along said west line and the west line of the East One-half of the Southwest Quarter of Section 3, Township 24 North, Range 8 East to the north line of the South One-half of the Southwest Quarter of said Section 3; thence east along said north line and the north line of the South One-half of the Southeast Quarter of said Section 3 and the north line of the South One-half of the Southwest Quarter and the Southeast Quarter of Section 2 to the west line of Section 1, Township 24 North, Range 8 East; thence south along said west line to its southwest corner; thence east along the south line of said Section 1 to its southeast corner which is on the Range line between Range 8 East and Range 9 East; thence south along said Range line to the east-west quarter line of Section 7, Township 24 North, Range 9 East; thence east along said quarter line to the northeast corner of Government Lot 18 in said Section 7; thence south along the east line of said Government Lot 18 and the east line of Government Lot 19 in said Section to the north line of Section 18, Township 24 North, Range 9 East; thence east along said north line to the northeast corner of Government Lot 5 in said Section 18; thence south along the east line of said Government Lot 5 and the east line of Government Lots 8, 17, and 20 of said Section 18 and the east line of Government Lots 5, 8, 17, and 20 of Section 19, Township 24 North, Range 9 East and the east line of Government Lot 5 of Section 30, Township 24 North, Range 9 East, to the southeast corner of said Government Lot 5 of said Section

30; thence west along the south line of said Government Lot 5 and the south line of Government Lot 6 of said Section 30 to the Range line between Range 8 East and Range 9 East; thence south along said Range line to the southeast corner of Section 36, Township 24 North, Range 8 East; thence south along the east line of Section 1, Township 23 North, Range 8 East to the north line of the South One-half of the Northeast Quarter of said Section 1; thence west along said north line and the north line of the South One-half of the Northwest Quarter of said Section 1 and the north line of the South One-half of the Northeast Quarter and the Northwest Quarter of Section 2, Township 23 North, Range 8 East to the west line of said Section 2; thence north along said west line to the south line of Section 35, Township 24 North, Range 8 East; thence west along said south line and the south line of Section 34 to the point of beginning and there terminating.

The five year time of travel (TOT) for the Whiting well fields shown on the attached map and described as: beginning at the intersection of Porter Rd. and Hoover Rd., then north along Hoover Rd. to the intersection with the Wisconsin Central Railroad Limited, then east along the Wisconsin Railroad tracks to the intersection with Eisenhower Rd., then south along Eisenhower Rd. to its intersection with Porter Rd., then west along Porter Rd., to the intersection with Hoover Rd. and there terminating. Land use restrictions within Groundwater Protection Overlay District B are less restrictive than in Overlay District A because of longer flow times and a greater potential for remediation, dilution and attenuation. Uses not listed as permitted or conditional uses are to be considered prohibited uses.



Map Document: (P:\PT\S\STEPT\107037\Project\Wellhead Protection Plan\Figures\Groundwater Protection Area.mxd)

SEH

425 WEST WATER STREET
SUITE 300
APPLETON, WI 54911-6058
PHONE: (920) 380-2800
FAX: (920) 380-2801
www.sehinc.com

STEVENS POINT WATER UTILITY
WELL NO. 11 WELLHEAD PROTECTION PLAN

PROJECT: STEPT 107037

DATE: FEB 2012

GROUNDWATER PROTECTION OVERLAY DISTRICTS

3.2 Permitted Uses

The following uses are permitted within Groundwater Protection Overlay District B.

1) All uses listed as permitted uses in Groundwater Protection Overlay District A

2) Sewered residential uses

3) Above ground petroleum product storage tanks up to 660 gallons

4) Basement heating fuel storage tanks

5) Commercial and/or industrial uses served by municipal sanitary sewer, except those listed as prohibited uses in Section e Prohibited Uses

6) Unsewered (single family) residential uses

3.3 Design Standards

The following standards and requirements shall apply to all uses permitted within Groundwater Protection Overlay District B.

1) Minimum lot size for unsewered residential uses shall be two acres, except for; a) existing lots of record on the effective date of this Ordinance and b) developments which will be served by municipal sewer within five years of the approval of the development. In order to provide for efficiently serving these developments with municipal sewer, lots smaller than two acres can be approved, provided that sufficient land area will be maintained in an undeveloped state such that no more than one residence is allowed for each two acres of the overall development.

2) All commercial and industrial uses are allowed a maximum of 50% of the lot area to be maintained in manicured lawn or grass. However, the area of the lot in manicured lawn or grass shall not exceed the area of impervious surfaces on the lot.

3) Sewered residential uses are allowed to have a maximum area of manicured lawn or grass as shown below:

Lot Area	Lawn Area (square feet)
16,000 sq ft	6,000
½ Acre	8,000
¾ acre	11,000
1 acre	14,000
1 ½ acres	20,000

2 acres	26,000

4) Maximum lawn areas for lot sizes not listed shall be based on the average percentage of lawn area allowed on the two nearest lot sizes listed.

5) Unsewered residential uses are allowed to have a maximum area of manicured lawn or grass as shown below:

Lot Area	Lawn Area (square feet)
2 acres	8,000
3 acres	21,000
4 acres	31,000
5 acres	44,000

6) Maximum lawn areas for lot sizes not listed shall be based on a weighted average of the percentage of lawn area allowed on the two nearest lot sizes listed.

7) Natural vegetative covers, not requiring the use of pesticides or fertilizers after initial establishment are encouraged as an alternative to manicured lawn or grass.

8) All petroleum storage tanks shall provide leak proof containment not less than 125% of the tank volume, except basement heating fuel storage tanks.

9) All storm drainage shall be retained on site or discharged to a municipally operated storm drain. If retained on site, storm water shall be discharged to settling ponds where it will percolate through at least six inches of topsoil. Use of drywells or other subsurface drains for stormwater drainage is prohibited.

10) Pesticide and fertilizer storage is permitted at the location of retail sales of these products, provided that the products are delivered in retail quantity containers and no repackaging and/or mixing is done on site.

11) Pesticide and fertilizer storage is permitted at the location of agricultural use of these products.

3.4 Conditional Uses

The following uses may be permitted on a case-by-case basis, providing adequate groundwater protection and monitoring measures, as determined by the Stevens Point Plan Commission and Common Council, are instituted.

1) Nurseries for ornamental plants, green houses, and associated retail sales outlets.

2) Pesticide and fertilizer storage and use associated with uses in (1) above.

3) Vehicle repair shops, auto body repair shops.

4) Cemeteries

5) Salt storage, including sand/salt combinations.

6) Recycling facilities.

7) Printing and duplicating businesses which use hazardous chemicals as defined in DPA in their printing process

3.5 Prohibited Uses

The following uses are prohibited uses within Groundwater Protection Overlay District B. These uses are prohibited based on the high probability that activities routinely associated with these uses (storage, use, and handling of potential pollutants) will cause groundwater contamination. Uses not listed are not considered permitted uses unless specifically listed above under Section 3(b) Permitted Uses.

1) Underground storage tanks of any size

2) Unsewered commercial and/or industrial development

3) Septage and/or sludge spreading

4) Animal waste facilities

5) Animal confinement facilities (except veterinary hospitals and clinics)

6) stations and oil change businesses

7) Bus or truck terminals

8) Landfills

9) Wastewater treatment facilities

10) Spray wastewater facilities

11) Auto salvage yards

12) Bulk fertilizer and/or pesticide facilities

13) Asphalt products manufacturing

14) Dry cleaning facilities

15) Electroplating facilities

16) Exterminating shops

17) Paint and coating manufacturing

18) Hazardous and/or toxic materials storage

19) Hazardous and/or toxic waste facilities

20) Radioactive waste facilities

21) Garage and vehicular towing

22) Public and municipal maintenance garage

3.6 Where any of the uses listed in (e) above exist within Groundwater Protection Overlay District B on the effective date of this ordinance, owners of these facilities will be allowed to upgrade the facilities to facilitate or enhance groundwater protection. Plans for the proposed upgrade must be approved by the Plan Commission and Common Council, and appropriate permit issued by the City Inspection Department, prior to any work being initiated. Expansion of the prohibited use will not be allowed.

f) Sexual Oriented Business

1.0 Purpose and Intent.

It is the purpose and intent of this Ordinance to regulate sexually oriented businesses to promote the health, safety, morals, and general welfare of the citizens of the City and to establish reasonable and uniform regulations to prevent any deleterious location of sexually oriented businesses within the City, thereby reducing or eliminating the adverse secondary effects from such sexually oriented businesses.

The provisions of this Ordinance have neither the purpose nor effect of imposing a limitation or restriction on the content of any communicative materials, including sexually oriented materials. Similarly, it is not the intent nor effect of this ordinance to restrict or deny access by adults to sexually oriented materials protected by the First Amendment, or to deny access by the distributors and exhibitors of sexually oriented entertainment to their intended market. Neither is it the intent nor effect of the ordinance to condone or legitimize the distribution of obscene material.

2.0 Definitions.

For the purposes of this division, certain terms and words are defined as follows:

ORDINANCE AMENDING THE REVISED MUNICIPAL CODE
OF THE CITY OF STEVENS POINT, WISCONSIN

The Common Council of the City of Stevens Point, Portage County, Wisconsin, do ordain as follows:

SECTION I: That Section 23.02(4)(d)(3.1)of the Revised Municipal Code of the City of Stevens Point pertaining to the conditional use requirement for co-location of antennas be amended as follows:

3.1 Location of New Antennas and Co-Location of Antennas

Co-location or Freestanting New Antenna						
	Industrial	University & Commercial			Residential	Conservancy
	M-1 & M-2	B-4, B-5, & U	B-3	R-5, B-1, & B-2	RLD, R-1, R-2, R-3, & R-4	C
Antenna on existing tower or building (co-location)	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
New tower	Conditional	Conditional	Conditional	Conditional	Prohibited	Conditional
Height (max.)	150’ (175’ only within 2,000 feet of I-39 and not closer than 250’ of residences)	135’	120’	60’	60’	150’*
All antennas subject to airport height restrictions						
Setbacks (min.)	Height of tower (but not to exceed 150’)	Height of tower (but not to exceed 150’). Setbacks in “B-5” Highway Commercial may be one-half the height of the tower only in cases where the antenna array is constructed no more than 2’ from the exterior of the tower.			Height of tower	Height of tower*

Note: Setbacks in any district may be modified by the Common Council only in cases where the applicant has camouflaged the support structure by design or appearance that hides, obscures, or conceals the presence of the tower and antennas, for example, as a flag pole, or added the antenna to an existing support structure, for example on an existing light pole, and only in cases where the public interest is served by the modification.

New Telecommunications Towers are a conditional use in the M2 Heavy Industrial, M1 Light Industrial, B5 Highway Commercial, B4 Commercial, B3Central Business District, B2 Central Business Transition, B1 Neighborhood Commercial, University, R-5 Multifamily II, and C Conservancy Districts. Telecommunications Towers are prohibited in R-4, 3, 2, 1, & LD Residential Zones unless on publicly owned property. Preference will be given to sites which are greater than 300 feet from Residential Zones.

* exceptions to height and setback may be made in instances where the land in the vicinity of the proposed site in Conservancy zoning only is not developed to its full potential and in the opinion of the council the site is likely to remain undeveloped due to area constraints.

Antenna arrays may be mounted on the top of and attached to roofs of existing buildings or structures that are at least thirty feet (30') or more in height above the street grade upon which such building fronts or may be attached to the facades of buildings, existing towers, or other structures; provided, however, that such antenna arrays shall add not more than twenty feet (20') to the total height or elevation of such building from the street grade, (including the antenna array) and antenna arrays so mounted shall be obscured from view from the street up such building fronts by the use of screening materials designed, painted and maintained in a manner that will blend with the appearance of the building.

SECTION II: This ordinance shall take effect upon passage, publication, and the signing.

Approved: _____
Andrew J. Halverson, Mayor

Attest: _____
John Moe, City Clerk

Dated: March 19, 2012
Adopted: March 19, 2012
Published: March 23, 2012

McDill Dam Repair and Transfer Agreement 2012

INTERGOVERNMENTAL AGREEMENT WITH WHITING, PORTAGE COUNTY, STEVENS POINT AND THE MC DILL LAKE DISTRICT REGARDING THE REPAIR AND TRANSFER ISSUES RELATING TO COUNTY TRUNK HIGHWAY HH AND THE STRUCTURE OF THE UNDERLYING McDILL DAM

THIS AGREEMENT is entered by Portage County, (hereafter referred to as the "County"), and the Village of Whiting, (hereafter referred to as the "Village"), the City of Stevens Point (hereinafter "City") and the McDill Inland Lake Protection and Rehabilitation District (hereinafter "District").

1. This agreement is entered into by the parties as a contract under the Wisconsin Intergovernmental Agreement Statute, Wis. Stats., §66.0301. The purpose of this agreement is to specify terms for cooperative arrangements for the County, the City, the Village, and the District regarding the repair of the structure of the McDill Dam a/k/a the McDill Pond Dam (as more particularly described in the 1999 DNR permit to the Village) and the subsequent transfer of ownership rights and license for the dam from the Village to the District, and the operational maintenance responsibilities from the Village to District and then to the City.

2. The parties represent that they have the following understandings:

(a) Whereas the structure known as the McDill Dam (the structure on the Plover River in the Village of Whiting) upon which the County owns, operates, and maintains the right of way for its County Highway "HH" is one in which both the county and the Village have legal interests; and

(b) Whereas the Village owns the dam and has therefore a permit from the State of Wisconsin, Department of Natural Resources detailing its legal obligations; and

(c) Whereas inspection of the McDill Dam by the Village has revealed structural deficiencies which necessitated the draw-down of water and a closure of Highway "HH" (which has subsequently re-opened); and

(d) Whereas the Village and the County engaged an engineering firm (AECOM) to develop plan options which would repair the dam; and

(e) Whereas the Village, based upon the aforementioned plans, applied for and has received an approval for DNR grant funding for the repair project, with approval amounts as follows:

Grant Request Amount	$228, 325.00
40% Contingency	$ 91, 330.00
Total Proposed Allocation	$319, 655.00

(f) Whereas the County, the City and the District agree to fund the remainder cost of repairs in three equal shares (one share apiece) with the Village remaining as the supervisory authority for the repair due to its status as license holder, with such costs as set forth in the Municipal Dam Grant Program Grant Application signed by the Village and dated September 14, 2011 as set forth in Attachment C; and

(g) Whereas the County will coordinate the funding aspects of the repair project; and

(h) Whereas upon the satisfactory completion of the repair project and certification thereof by the supervisory engineering firm, the parties agree that, within thirty days of the certification that: all ownership rights in the dam shall be transferred from the Village to the

District, subject to DNR approval; the county's right of way property interests in the roadway of the highway ("HH"); and that the Village and District will transfer operational maintenance duties to the City.

3. The County, the City and the District agree to fund the remainder cost of repairs in three equal shares (one share apiece) with the Village remaining as the supervisory authority for the repair due to its status as license holder, with such costs as set forth in the Municipal Dam Grant Program Grant Application signed by the Village and dated September 14, 2011, with remainder defined as the amount unpaid after the receipt of the aforementioned DNR grant, as set forth in Attachment C.

4. The County will coordinate the funding and fiscal aspects of the repair project.

5. Upon the satisfactory completion of the repair project and certification thereof, the parties agree that, within thirty days of the certification that: all ownership rights in the dam shall be transferred from the Village to the District, subject to DNR approval; the county's right of way property interests in the roadway of the highway ("HH") under the terms and conditions as set forth in Attachment A to this Agreement and incorporated herein by reference; and that the Village and District will transfer operational maintenance for the dam from the Village to the District and then to the City under the terms and conditions as set forth in Attachment B to this Agreement.

6. The parties to this Agreement will act in good faith in attempting to meet timelines as set forth in this agreement giving due consideration to the fact that the Agreement provides for multitasks of different parties which may be delayed based on other non-parties such as the Department of Natural Resources being a regulatory body which this contract is subject to.

7. Term. This agreement shall be effective upon its execution and terminate upon the transfer of authority set forth in paragraph 5. It is anticipated that the term shall be completed no later than October 1, 2012. The parties all shall agree upon a repair schedule for the repair project as set forth in paragraph 3.

8. Integration. This written contract is one which all parties agree to be the final complete and integrated expression of their agreement. Except as specifically stated in this agreement, no outside or additional terms or conditions exist. This agreement is an integrated final contract of the parties, superseding all prior verbal statements of any representative or agent of the parties. Any modification of this agreement must be in writing.

9. Binding Effect. The signature of the parties shall be of binding effect such that each will comply with all terms and conditions expressed herein.

10. Prohibition of Discrimination. All parties hereby agree to specifically comply with all state, federal, and local law prohibiting discrimination by reason of race, color, religion, sex or national origin during the terms of this contract

11. Compliance. Each party shall abide in all aspects with local, state, and federal laws, rules and regulations which concern the operation of municipal entities, including specifically laws concerning equal opportunity, anti-discrimination, and the Americans with Disabilities Act. This agreement is an intergovernmental contract authorized pursuant to sec. 66.0301, Wis. Stats.

12. Complete understanding. This agreement contains the entire understanding of the parties with respect to the subject matter hereof and supersedes all prior oral or written agreements of the parties with respect to such subject matter. By execution of the agreement, all parties agree

that they have read and understood all terms of this agreement. For purposes of construction, this agreement shall be deemed to have been drawn jointly and equally by the parties to the agreement.

13. Severability. If any portion of this Agreement is held to be invalid, such provision shall be considered severable, and the remainder of this Agreement shall not be affected.

14. Wisconsin Law. This agreement shall be enforced pursuant to the laws of the State of Wisconsin.

15. Final Clause. Each party has read the agreement and certifies that it will comply with all its terms and conditions and that the official executing the agreement has lawful authority to bind the party. Further, each party will retain an original copy of this agreement, therefore it shall be executed in four original documents.

THE UNDERSIGNED HAS READ THE FOREGOING AGREEMENT, FULLY UNDERSTANDS IT, AND HAS FULL AUTHORITY TO SIGN IT.

IN WITNESS WHEREOF each party executes this agreement on the date indicated by its authorized representative.

FOR PORTAGE COUNTY

_____ Dated this __ day of _____ 2012
Patty Dreier, County Executive

FOR THE VILLAGE OF WHITING

_____ Dated this __ day of _____ 2012
Paul Stroik, President

FOR THE CITY OF STEVENS POINT

_____ Dated this __ day of _____ 2012
Andrew Halverson, Mayor

FOR LAKE DISTRICT (McDill Inland Lake Protection and Rehabilitation District)

_____ Dated this __ day of _____ 2012
Jack Negaard, Chair

Attachment A-Transfer of Ownership Rights From Village to the District
Attachment B-Transfer of Operational Maintenance Duties Between the City and the District
Attachment C-Costing Spreadsheet

AGREEMENT

This Agreement is made by and between the Village of Whiting, a Wisconsin municipal corporation (the "Village"), and the McDill Inland Lake Protection and Rehabilitation District, a Wisconsin Chapter 33 District (the"District").

RECITALS

R.1. The Village owns and maintains the dam located on McDill Pond in Whiting, Wisconsin (the "Dam").

R.2. The Dam provides part of the underlay of Portage County Trunk Highway HH ("Highway HH").

R.3. In the late spring of 2011, the Village discovered a sink hole in the embankment portion of the Dam/Highway HH.

R.4. An AECOM study commissioned by the Village and Portage County proposed several alternatives to remedy the situation.

R.5. A consensus arose that the medium cost alternative of the three remedies be pursued.

R.6. At the request of the District, the Village applied for a grant (the" Grant") with the Wisconsin Department of Natural Resources (the "DNR") that, if awarded, would partially fund the needed repairs to the Dam/Highway HH (the "Repairs").

R.7. Regardless of whether or not it is awarded the Grant, the Village has no money to fund any or all of the Repairs. Further, the Village no longer has the funds to continue maintenance and ownership of the Dam.

R.8. The Village desires to transfer ownership of the Dam to a responsible party or to abandon the Dam if no such ownership transfer can take place.

R.9. The District desires that the Dam be repaired and stay in place. The District has expressed a willingness to assume ownership subject to approvals by its board and the DNR.

AGREEMENT

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged and in consideration of the above Recitals which are incorporated herein by reference, the parties agree as follows:

1. The Village shall sell, transfer and assign the Dam to the District together with a non-exclusive access easement for repairs and maintenance of the Dam and any and all flowage and riparian rights appurtenant to the Dam. The Dam on the north side runs from natural embankment to natural embankment. On the south side, it runs from the natural embankment (beginning at the fence located by the rip rap that is east of the park entrance) to Post Road. (See attached photo with "X's" marking the area to be transferred.) The transfer will be subject to Portage County's rights in Highway HH as located on the Dam. Further, the Village reserves the right to maintain and replace existing utilities in the Highway HH right-of-way as well as construct new utilities as necessary. Any utility maintenance and construction by the Village will be performed in a manner as to not interfere with the District's operation and maintenance of the Dam. The District, when using the access easement for repairs and maintenance of the Dam, will promptly restore the surface of the easement area disturbed by the District's use to its condition before the disturbance. The Village retains all riparian rights to its land located below and south of the Dam. However, such riparian rights will be subject to the flowage rights conveyed to the District. The Village or its assigns will not make any claim for damage or loss of use of its riparian rights by the District in exercising its flowage rights.

2. The Dam, easement, flowage and riparian rights will be transferred "as is" and without any representation or warranty by Quit Claim Deed. Any necessary costs incurred to close the sale such as survey and title insurance costs will be the sole responsibility of the District.

3. As additional consideration herein, the District will pay the Village $59,595.00 for costs incurred by the Village in connection with its ownership and maintenance responsibilities for the Dam over the past two and one-half (2½) years. These costs include the Inspection and Operation Manual (IOM), Emergency Action Plan (EAP), and Dam Analysis Report. This amount is due and payable at the time of closing on the sale of the Dam.

4. Pending the closing on the sale of the Dam, the District agrees that the Village will not be responsible for any of the costs of the Repairs to the Dam, and that such party will indemnify and hold the Village harmless from any such costs including, but not limited to, cost overruns for the Repairs.

5. The closing on the sale of the Dam will occur as soon as possible after approval of the transfer of ownership by the DNR. The parties agree to cooperate in executing all necessary documents and providing needed information to facilitate the approval of such transfer and to otherwise carry out the provisions of this Agreement.

6. Upon transfer of ownership of the Dam pursuant to this Agreement, the Village will no longer have any responsibility for the Dam including, but not limited to, maintenance and financial responsibilities.

7. If the DNR fails to approve the transfer of Dam ownership to the District, the District will promptly seek a new buyer of the Dam acceptable to the DNR (the "Substitute Buyer"). Any costs incurred by the Village arising from its ownership and operation of the Dam during this period of obtaining DNR approval of the transfer of the Dam to the Substitute Buyer will be the responsibility of the District. The District agrees to indemnify and hold the Village harmless from such costs. Further, if the transfer of the ownership of the Dam to the Substitute Buyer is not approved by the DNR within one (1) year of the completion of the Repairs, it is agreed that the Village may then commence proceedings to abandon the Dam.

8. In any legal proceedings instituted by either party for the enforcement of the terms and conditions of this Agreement, the successful party shall be reimbursed by the other party for all costs, expenses and actual attorney fees which are reasonably incurred in such proceedings.

Dated: February _____, 2012.

THE VILLAGE OF WHITING

By:_____
Paul Stroik, Village President

_____
Debra Lutz, Clerk/Treasurer

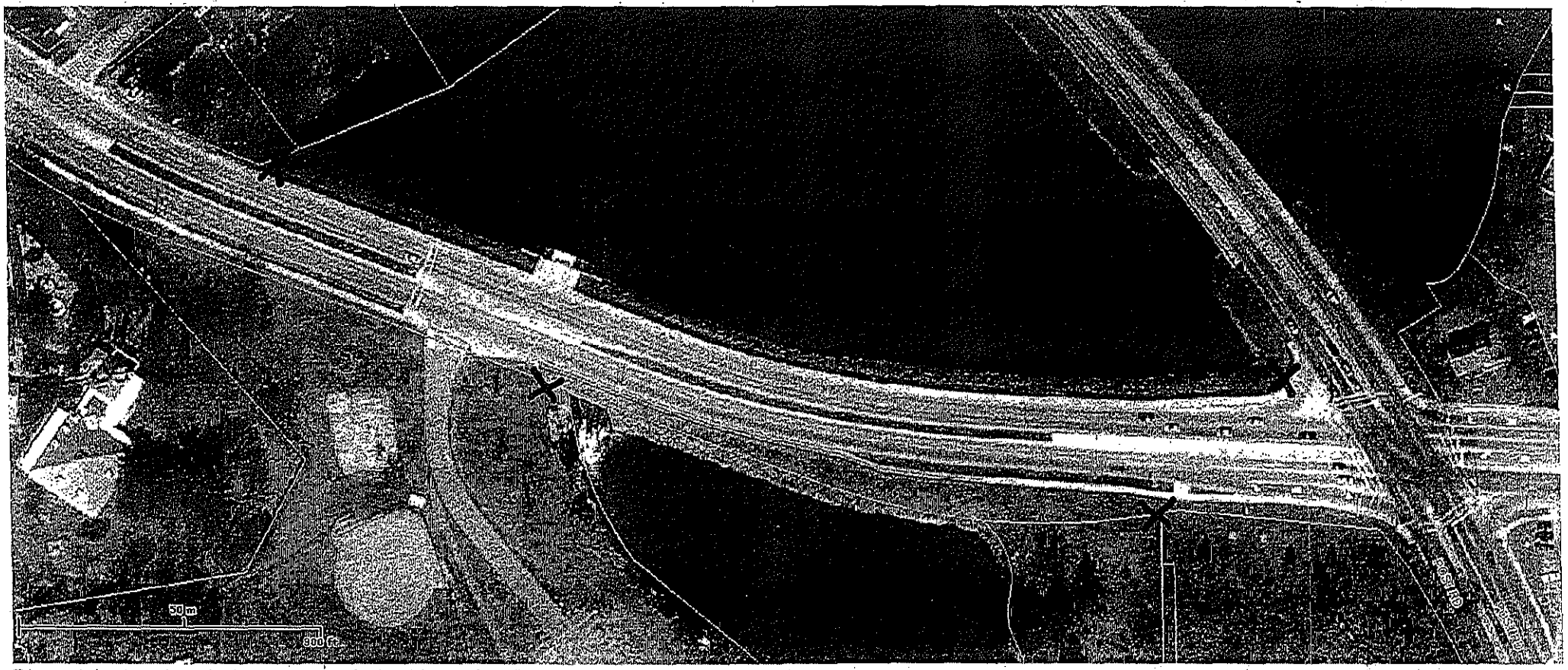
MCDILL INLAND LAKE PROTECTION AND REHABILITATION DISTRICT

By:_____
Jack Negaard, President

_____
Krista Olson, Secretary

RFK:des 10/21/11 4155.006 377028

My Map



This map does not constitute a legal survey. Contact Planning and Zoning Office (715) 346-1334 Mon Jan 30 2012 10:58:43 AM.

OPERATION AND MANAGEMENT AGREEMENT

FOR THE McDILL DAM

THIS OPERATION AND MAINTENANCE AGREEMENT FOR THE McDILL DAM ("Agreement") is entered into as of the _____ day of February, 2012 by and between McDill Inland Lake Protection and Rehabilitation District, a Wisconsin municipal corporation organized pursuant to Chapter 33 of the Wisconsin Statutes ("District" or "Owner") and the City of Stevens Point, a Wisconsin municipal corporation ("Operator"), collectively referred to as "the Parties."

RECITALS

WHEREAS the District has entered into an agreement with the Village of Whiting, pursuant to which the District will assume legal title and regulatory responsibility for the dam operation and maintenance and assume the ownership of the McDill Dam, located in the Village of Whiting, Portage County, Wisconsin on or about February _____, 2012; and

WHEREAS the Operator has been requested to operate the McDill Dam, and will obtain the qualifications and expertise necessary to operate dams in compliance with applicable state and federal regulatory requirements and has reviewed, understands and accepts the Operating Orders for the McDill Dam, and

WHEREAS, the District desires to engage Operator to operate and manage the McDill Dam upon its transfer from the Village of Whiting to the District and Operator will undertake the operation and management of the McDill Dam pursuant to the terms, provisions and conditions of this Agreement, and

WHEREAS, this Agreement will become effective only when the District has obtained legal title and regulatory responsibility for the dam operation and maintenance and has assumed the ownership of the McDill Dam located in the Village of Whiting, Portage County, Wisconsin.

NOW THEREFORE IT IS HEREBY AGREED:

I. SCOPE OF SERVICES

1.1. Scheduled Services: Dam Operation, Inspection and Maintenance. Operator shall assume the responsibilities for General Operation, Inspection and maintenance of the McDill Dam on behalf of the District during the term of this Agreement, including any extension. Operation, inspection and maintenance shall be performed as described in the *McDill Dam Operation, Inspection and Maintenance Plan (the "OIM Plan"(included as part of this contract by reference) as well as the Emergency Action Plan (the "EA Plan")* attached as Exhibit A.

Operation and Inspection Services shall generally mean the operation and adjustment of vertical slide gates as necessary to maintain discharge and water surface elevations; the preparation, distribution and archiving of water levels, gate settings and incident reports in paper and electronic form, the execution of "operation and maintenance inspections", and the coordination of the "engineering inspections" all pursuant to sections 2 and 3 in the OIM Plan.

Maintenance Services shall generally include (i) the maintenance of vegetation growth, signage and fencing, removal of debris and obstructions, and the maintenance of erosion control features, all pursuant to section 4 in the OIM Plan. When maintenance items exceed the scope as described above, work should proceed according to Exhibit B.

1.2. Facilities Knowledge and Advice. Operator shall become familiar with the McDill Dam and its control of discharges and water elevations on the McDill Pond and reaches of the Plover River, including review and understanding of the Scope of Services, the OIM Plan; and the physical attributes of the dam site and the dam (including its gates, equipment and facilities).

Operator shall review and recommend revisions to the *OIM Plan*, as it deems appropriate. The District may, after review, consultation and approval by Operator, revise the Plan, provided that any such revisions are consistent with the responsibilities of the Parties. The District may at any time, in response to suggestions made by Operator or on its own initiative, elect to revise the *OIM Plan* to meet the then-current needs of the District, provided that such revisions are consistent with the responsibilities of the Parties under this Agreement and accepted by Operator.

1.3. Unscheduled Services. When the District determines that Services not included in the *OIM Plan* are required, the District shall provide Operator with a description of such services, and may request that Operator provide the District with an estimate of the cost of the proposed additional services, and a schedule in which Operator could perform the services. Should the projected cost and schedule be acceptable to the District, the District shall give Authorization and Operator shall proceed to perform the additional Services under the terms and conditions set forth in Paragraph IV (4.2) of this Agreement. Nothing herein shall preclude the District from electing to obtain additional services from a third party supplier.

1.4. Emergency Response Services. Operator shall designate a person to serve as the primary operator of the dam (the "Primary Operator") pursuant to the EA Plan appended to the OIM Plan and shall provide the District and the Wisconsin Department of Natural Resources with the name and telephone contract number of such Primary Operator and provide for emergency telephone contact as provided in the EA Plan. In the event that any person notifies the Primary Operator of any condition at the dam or dam site, the Primary Operator or designated appointee shall take all necessary actions as specified in the EA Plan and shall promptly investigate the condition, advise the District's representative of the nature of the condition and recommended remedial actions and shall supervise and implement remedial

actions. Operator shall take prompt and timely action to prevent or minimize damage to the Dam facilities and equipment, and to facilitate their restoration to service, in a weather or other emergency. Operator shall maintain Staffing and Equipment sufficient for 24-hour per day, seven days per week provision of Emergency Response Services to the Dam according to the EA Plan. Operator shall be compensated for such service as provided in Exhibit B.

1.5. Special Training. Operator shall maintain safety and training programs adequate and necessary to ensure that all personnel performing the Services are fully capable, qualified and trained to perform the Services.

II. TERM OF AGREEMENT.

This Agreement shall be effective upon the date of execution and shall continue in effect through December 31, 2022. The Agreement may by mutual agreement be renegotiated at the end of the term.

III. REQUIRED REGULATORY APPROVALS.

The effectiveness of this Agreement is hereby expressly conditioned upon the issuance of all permits, regulatory authorizations and regulatory approvals that are required by the Parties to enter into and perform their obligations under this Agreement in a form acceptable in the reasonable judgment of the Party affected thereby.

IV. COMPENSATION AND INVOICING.

4.1. Scheduled Services. The District shall compensate Operator for the Schedule of Services described in Paragraph 1.1 in the amounts as set forth on Exhibit B which is attached hereto. All payments shall be due within sixty (60) days of receipt of an invoice submitted by Operator to District.

4.2. Unscheduled Services. Operator shall submit invoices for the provision of any Unscheduled or Emergency Response Service pursuant to Paragraphs 1.3 and 1.4 of this Agreement, within 60 days following the completion of such services, itemizing its direct and indirect costs by category as set forth in Exhibit B. The District shall compensate Operator for such additional Services set forth in Exhibit B.

4.3. Audits and Adjustments. Operator shall maintain and retain for such time as the District may reasonably direct, but not for longer than six years, the books and other records needed to document the costs Operator incurs as a result of fulfilling its obligations under Paragraphs 1.3 and 1.4 of this Agreement. Operator shall respond to any reasonable request from the District for information related to a cost charged by Operator to the District by providing the District the information reasonably needed by the District to verify the cost in question. From time to time, the District may conduct, and Operator shall permit the District to conduct or cause to be conducted by its authorized agents, at the District's expense, audits of the books and records of Operator that relate to the Services provided under this Agreement. Such audits will be conducted at reasonable, mutually agreed upon times, provided that the District must contest invoices within one year of receipt and must complete any audit relating to a contested invoice within a reasonable period of time thereafter.

V. PERFORMANCE STANDARDS

5.1. Operator represents and warrants that all Services shall be performed through trained and competent personnel, shall be performed in a manner that will enhance the useful life, safety and reliability of the McDill Dam, and shall be performed in accordance with (i) the OIM Plan and the Operating Order; (ii) all applicable state and federal regulations, permits and licenses; (iii) generally accepted standards of practices, methods and acts engaged in or approved

by a significant portion of the dam industry; and (iv) any applicable insurance policies and manufacturers' recommendations and in a manner that will preserve all manufacturers' warranties (the "Performance Criteria").

In the event of a conflict between any of the Performance Criteria, Operator shall determine a course of action to be taken.

5.2. Operator shall be responsible for determining the manner of performance and for supervision of the work specified herein.

5.3. The District shall procure and maintain all certificates and licenses required for the performance of the Services, and shall provide Operator with all necessary access to the facilities and property upon which the McDill Dam is located.

5.4. The District shall provide any information known or readily available to it including available specifications, documents and drawings regarding existing structures and facilities, subsurface conditions, or other conditions relevant to the performance of the Services.

VI. FORCE MAJEURE

(a) Neither Party shall be responsible or liable, or deemed in breach hereof, to the extent the performance of its respective obligations hereunder is prevented or delayed due solely to circumstances beyond the reasonable control and without the fault or negligence of the party experiencing such impediment to performance, including but not limited to acts of God; war; riots; strikes, lockouts or other labor disturbances; labor or material shortages, including unavailability of Operator resources required for Operation Services or required for fulfillment of the Operation, Inspection and Maintenance Plan; actions or failures to act on the part of governmental authorities preventing or delaying performance; inability despite due diligence to obtain required licenses; or fire (such causes hereinafter called "Force Majeure").

(b) The Party experiencing the Force Majeure shall exercise due diligence in endeavoring to overcome any Force Majeure impediment to its performance, but settlement of its labor disturbances shall be entirely within its discretion. The Party experiencing the Force Majeure shall promptly give written notification to the other Party. This written notification shall include a full and complete explanation of the Force Majeure and its cause, the status of the Force Majeure, and the actions such Party is taking and proposes to take to overcome the Force Majeure.

VII. LIMITATION ON LIABILITY

With respect to claims by and between the Parties under this Agreement, the measure of damages at law or in equity in any action or proceeding shall be limited to direct actual damages only, such direct actual damages shall be the sole and exclusive remedy and all other remedies or damages at law or in equity are waived and neither Party shall be liable in statute, contract, in tort (including negligence), strict liability, warranty or under any other legal theory or otherwise to the other Party, its agents, representatives, and/or assigns, for any special, incidental, punitive, exemplary or consequential loss or damage whatsoever, including, but not limited to, loss of profits or revenue on work not performed, for loss of use of or under-utilization of the other Party's facilities, loss of use of revenues, attorneys' fees, litigation costs, or loss of anticipated profits, resulting from either Party's performance or non-performance of an obligation imposed on it by this Agreement, without regard to the cause or causes related thereto, including the negligence of any party. The Parties expressly acknowledge and agree that this limitation shall apply to any claims for indemnification under Article IX of this Agreement. The provisions of this Paragraph shall survive the termination or expiration of this Agreement.

VIII. INDEMNITY

8.1. Operator's Indemnification. Subject to the provisions of Article VIII, Operator shall indemnify, hold harmless and defend the District, and its officers, directors, employees, affiliates, managers, members, trustees, agents, contractors, subcontractors, affiliates' employees, invitees and successors, from and against any and all claims, demands, suits, obligations, payments, liabilities, costs, losses, judgments, damages and expenses (including the reasonable costs and expenses of any and all actions, suits, proceedings, assessments, judgments, settlements, and compromises relating thereto, expert fees and reasonable disbursements in connection therewith) for damage to property, injury to any person or entity, or death of any individual, including the District's employees, Operator's employees, or any other third parties, to the extent caused wholly or in part by any act or omission, negligent or otherwise, by Operator or its officers, directors, employees, agents, contractors, subcontractors and invitees arising out of or connected with Operator's performance or breach of this Agreement, or the exercise by Operator of its rights hereunder; provided, however, that the provisions of this Paragraph shall not apply if any such injury, damage or death is held to have been caused by the negligence or intentional wrongdoing of the District, its agents or employees.

8.2. The District's Indemnification. Subject to the provisions of Article VIII, the District shall indemnify, hold harmless and defend Operator, its parent and its officers, directors, employees, affiliates, managers, members, trustees, shareholders, agents, contractors, subcontractors, invitees and successors, from and against any and all claims, demands, suits, obligations, payments, liabilities, costs, losses, judgments, damages and expenses (including the reasonable costs and expenses of any and all actions, suits, proceedings, assessments, judgments, settlements, and compromises relating thereto, reasonable attorneys' and expert fees and reasonable disbursements in connection therewith) for damage to property, injury to any person

or entity, or death of any individual, including Operator's employees, the District's employees, or any other third parties, to the extent caused wholly or in part by any act or omission, negligent or otherwise, by the District or its officers, directors, employees, agents, contractors, subcontractors and invitees arising out of or connected with the District's performance or breach of this Agreement, or the exercise by the District of its rights hereunder; provided, however, that the provisions of this Paragraph shall not apply if any such injury, damage or death is held to have been caused by the negligence or intentional wrongdoing of Operator, its agents or employees.

8.3 Indemnification Procedures. Any Party seeking indemnification under this Agreement shall give the other Party notice of such claim as soon as practicable but in any event on or before the thirtieth (30th) day after the Party's actual knowledge of such claim or action. Such notice shall describe the claim in reasonable detail, and shall indicate the amount (estimated if necessary) of the claim that has been, or may be sustained by, said Party. To the extent that the other Party will have been actually and materially prejudiced as a result of the failure to provide such notice, such notice will be a condition precedent to any liability of the other Party under the provisions for indemnification contained in this Agreement. Neither Party may settle or compromise any claim for which indemnification is sought under this Agreement without the prior consent of the other Party; provided, however, said consent shall not be unreasonably withheld or delayed. Each Party's indemnification obligation will survive expiration, cancellation or early termination of this Agreement.

IX. INSURANCE

Prior to beginning work under this Agreement, and continuing for the entire term hereof, District shall, at its own cost and expense, maintain insurance coverages through carriers satisfactory to Operator subject to reasonable deductibles and in limits set forth below:

(i) **Commercial General Liability** insurance, including contractual liability for liabilities assumed by Operator under this Agreement in combined single limits of not less than $ 1,000,000.00.

(ii) **Insurance Liability.** Dam or impoundment of water – coverage of not less than 1,000,000.00.

The Operator shall be named as an additional insured on all insurance policies required under this Paragraph. In the event the District is unable to obtain the insurance coverage called for in this Agreement, Operator shall make every effort to arrange for such insurance coverage and the District shall reimburse the Operator for the cost thereof, provided that the District shall have the right to approve the insurance obtained and the cost if in excess of $_____ per year.

District shall furnish the Operator with duly executed Certificate(s) of Insurance specifying the dates when such insurance coverage(s) commence and expire and certifying that the insurance carrier(s) will endeavor to provide the Operator with thirty (30) days prior written notice of any material change in, or cancellation of such insurance coverages.

The Operator shall have the right to inspect the original policies of insurance at District's place of business during regular business hours, or to request that copies of policies or Paragraphs of policies be delivered to it.

X. SUCCESSORS AND ASSIGNS

This Agreement and each and every covenant, term and condition hereof, shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors and permitted assigns. Operator shall not assign its rights or obligations hereunder without express written approval of the District.

XI. NOTICE

(a) All certificates or notices required hereunder shall be given in writing and addressed or delivered to the representative(s) specified in this Agreement. Notices shall be deemed received (i) upon delivery, when personally delivered; (ii) upon receipt, when sent via registered or certified mail; (iii) the next business day, when sent via overnight courier; and (iv) upon transmittal, when sent via facsimile. Copies of all general correspondence regarding this Agreement shall also be sent to these representative(s).

(b) Notices submitted hereunder shall be directed to the following individuals:

Notices to McDill Inland Lake Protection and Rehabilitation District:

Attn: Jack R. Negaard, President
McDill Inland Lake Protection and Rehabilitation District
3325 Yvonne Drive
Stevens Point, WI 54481
(715) 498-2138

Notices to City of Stevens Point:

Attn: Joel C. Lemke, Director of Public Works
City of Stevens Point
1515 Strongs Avenue
Stevens Point, WI 54481

(c) The District or Operator may change their respective representative(s) designated to receive notice hereunder by written notice to the other Party.

XII. MISCELLANEOUS

12.1. Entire Agreement.

This Agreement, together with the Exhibits references and Appendices attached hereto, is the entire understanding of the Parties regarding the subject matter hereof, and supersedes all prior oral or written discussions, negotiations and agreements the Parties may have had with respect to the subject matter hereof.

12.2. Counterparts.

This Agreement may be executed in any number of counterparts, and each counterpart shall have the same force and effect as the original instrument.

12.3. Amendment.

No amendment, modification or waiver of any term hereof shall be effective unless set forth in a writing signed by both the District and Operator.

12.4. Survival.

All warranties, remedial obligations, indemnities and confidentiality rights and obligations provided for herein shall survive the cancellation, expiration or termination hereof.

12.5. Independent Operator.

Operator at all times shall be deemed to be an independent Operator and none of its employees or the employees of its sub-contractors shall be considered to be employees of the District during the term of this Agreement. Operator shall have no authority to act on behalf of the District or bind the District in any manner except as expressly set forth in this Agreement. The Parties acknowledge that neither this Agreement nor any of its provisions are intended to create any partnership or joint venture between the Parties.

12.6. No Implied Waivers.

The failure of a Party to insist upon or enforce strict performance of any of the provisions of this Agreement shall not be construed as a waiver or relinquishment to any extent of such Party's right to assist or rely upon any such provisions, rights and remedies in that or any other instance; rather, the same shall be and remain in full force and effect.

12.7. No Third-Party Beneficiaries.

This Agreement is intended to be solely for the benefit of the District and Operator and their successors and permitted assigns and is not intended to and shall not confer any rights or benefits on any third party (other than successors and permitted assigns) not a signatory hereto.

12.8. Severability.

In the event that any provision of this Agreement is deemed as a matter of law to be unenforceable or null and void, such unenforceable or void portion of such provision shall be deemed severable from this Agreement unless the removal of the unenforceable provision materially alters the obligations of either Party hereunder. Even if there is a material alteration in the remainder of the Agreement, the Agreement shall continue in full force and effect as if such provision was not contained herein, but the Parties shall negotiate in good faith new provisions in relation to the deleted provision that will to the extent practicable restore the benefit of the bargain contained in such provision and that are consistent with the Operation, Inspection and Maintenance Plan and Operating Orders.

12.9. Governing Law.

This Agreement shall be governed by and construed in accordance with the laws of the State of Wisconsin.

12.10. Headings.

The headings set forth herein are inserted for convenience and shall have no effect on the interpretation or construction of this Agreement.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives, effective as of the date first written above.

McDILL INLAND LAKE PROTECTION AND REHABILITATION DISTRICT

By: _____
Jack R. Negaard, President

Attest: _____
Krista Olson, Secretary

Dated: _____

CITY OF STEVENS POINT

By: _____
Andrew J. Halverson, Mayor

Attest: _____
John V. Moe, Clerk

Dated: _____

EXHIBIT B

District shall compensate Operator for the Schedule of Services described in 1.1, 1.3 and 1.4 on the following basis:

A) Individual maintenance and service events not exceeding Three Thousand Dollars ($3,000.00) per event shall be born solely by Operator.

B) Maintenance and service events which individually cost in excess of Three Thousand Dollars ($3,000.00) up to and including Twenty Thousand Dollars ($20,000.00) shall be born on an equal basis between Operator and District for such individual item.

Costs of DNR required dam inspections shall be born as follows: the first Three Thousand Dollars ($3,000.00) shall be the responsibility of the Operator and the balance shall be born equally by the Operator and District.

C) Maintenance or service events that exceed Twenty Thousand Dollars ($20,000.00) shall be presented to the Operator's Board of Public Works and the governing body of the District. Upon direction from both governing bodies, the Operator will act as directed. In the event the direction is to not participate from the Operators governing body, the Operator will work with the District to assist in arranging contracted work. Costs of said contracted work would be borne by the District. In the event the governing body of the District chooses not to participate, the Operator will present such decision to the Operators Board of Public Works. If the maintenance or service is in the opinion of the Operator or DNR, necessary for safe and compliant operation of the Dam, the Operator will inform the District of such opinions or orders. If the District decides to pursue abandonment of the Dam, the parties agree to proceed in accordance with "F" below. In the event the parties cannot agree, then Operator shall not be obligated to incur any further responsibility on performing such work or completing the same.

D) Dam inspections that are referred to as the "Engineering Inspections" in the OIM shall be scheduled by the operator. The cost for said inspections shall be covered according to items A, B, and C above.

E) Costs incurred for unscheduled services as described in IV. (4.2) will be born 100% by the District and shall be paid within 60 days of completion.

F) In the event the District and Operator are unable or unwilling to renegotiate this contract and the District, as owner of the Dam, chooses to formally abandon the Dam, the District and Operator will equally share the expenses associated with such abandonment. The District further agrees that prior to considering abandonment of the Dam, the District will offer to transfer ownership of the Dam to the Operator at no cost. The Operator is in no way obligated to take ownership of the Dam by way of this offer.

Attachment C
Summary of Projected Expenses & Local Share Commitments

Project Expenses - Description *	
Geotechnical Investigation	25,000
Grant Application	3,500
Design/Permitting	43,500
Construction Engineering	48,000
EAP/IOM Updates	3,000
Construction	390,300
Exterior Culvert Wall Grouting	109,085
Estimated Total Cost	622,385

WDNR Grant Reimbursement & Local Cost Share	
Total Estimated Expenses	622,385
Less:	
50% of First $400,000	200,000
25% of Next $800,000	55,596
Total WDNR Share	255,596
Total Remaining - Local Share	366,789

Summary of Local Share Commitment	Portage County	City of Stevens Point	McDill Lake District
Equal Shares of Remaining Local Share	122,263	122,263	122,263
Contingency Fund	25,000	25,000	25,000
Total Local Share Commitment	147,263	147,263	147,263

* Estimates as provided in the report by AECOM titled "Subsurface Exploration Findings and Conceptual Seepage Repair Alternatives for the McDill Dam" and further design as a result of the report. Actual dollar amounts will depend on WDNR review and approval and final design and construction costs.

RESOLUTION NO. _____

TO THE HONORABLE CHAIRMAN AND MEMBERS OF THE PORTAGE COUNTY BOARD OF SUPERVISORS

RE: APPROVING, RATIFYING, AND AUTHORIZING A REPAIR AND TRANSFER AGREEMENT (Four Party Agreement) WITH THE VILLAGE OF WHITING, THE CITY OF STEVENS POINT AND THE MCDILL INLAND LAKE DISTRICT FOR THE McDILL DAM

WHEREAS the structure known as the McDill Dam a/k/a Whiting Dam (the structure on the Plover River in the Village of Whiting) upon which the County owns, operates, and maintains the right of way for its County Highway "HH" is one in which both the county and the Village have legal interests; and

WHEREAS the City and the District also share public interests in the dam and the McDill Pond; and

WHEREAS the Village owns the dam and has therefore a permit from the State of Wisconsin, Department of Natural Resources detailing its legal obligations; and

WHEREAS inspection of the McDill in 2011 by the Village revealed structural deficiencies which necessitated the draw-down of water and the closure of Highway "HH", which was subsequently re-opened after further inspection; and

WHEREAS the four parties desire to, consistent with their respective legal obligations, share funding obligations for the repair of the dam, transfer operational responsibilities from the Village to the City, and transfer ownership of the dam itself from the Village to the District, all subject to the County's ownership of the right of way for Highway HH; and

WHEREAS the Village has applied for and received grant authorization from the State of Wisconsin, Department of Natural Resources, to assist in the funding of the repairs.

FISCAL NOTE: The County shall pay the amount not to exceed of $147, 263.00 towards the cost of the project as set forth in Attachment C to the agreement. The cost will be paid from the contingency fund and requires a two thirds supermajority vote of the Board (20) for passage.

NOW, THEREFORE, BE IT RESOLVED, that the attached agreement is approved ratified and authorized as an agreement under the Wisconsin Intergovernmental Agreement Statute, Wis. Stats., §66.0301, to approve, ratify and authorize the attached four-party agreement for the repair of the McDill Dam and all the terms therein, incorporated herein by reference.

DATED THIS 20th day of March 2012.

RESPTECTFULLY SUBMITTED,

PORTAGE COUNTY HIGHWAY COMMITTEE:

_____	_____
James Zdroik, Chair	Marion "Bud" Flood, Vice-Chair
_____	_____

Allen Haga, Jr.

Jerry Piesik

Stan Potocki

PORTAGE COUNTY FINANCE COMMITTEE

Lonnie Krogwold, Chairman

Perry Pazdernik

James Krems, Vice Chairman

Doug Radtke

Allen Haga, Jr.

ANDERSON / O'BRIEN
BERTZ, SKRENES & GOLLA ATTORNEYS SINCE 1886

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Stevens Point, WI 54481-0228
Fax: (715) 344-1012
Phone: (715) 344-0890
www.andlaw.com

Robert F. Konkol
Attorney

E-mail: rfk@andlaw.com

March 2, 2012

HAND DELIVERED

Mr. Michael J. McKenna
Corporation Counsel
Portage County Courthouse
1516 Church Street
Stevens Point, WI 54481

In Re: Whiting Dam Repair and Transfer Agreement
Our File: 4155.066

Dear Mike:

Thank you for the latest version of the Four-Party Agreement in the above matter. The Village will be transferring all of its rights in the Dam to the District. The District, in turn, will be transferring the operational maintenance responsibilities of the Dam to the City. Therefore, Line 16 on the first page and Line 18 on the second page should be changed to reflect this arrangement.

Regarding the Village remaining as a supervisory authority for the repair due to its status as license holder, the Village will want to make clear in any contract with the supervisory engineering firm that one of the firm's responsibilities will be to make sure that the repairs are done properly and satisfactorily. The Village has no expertise to assume this role.

If you have any questions on the above, please let me know.

Sincerely,

ANDERSON O'BRIEN
BERTZ, SKRENES & GOLLA

Robert F. Konkol

RFK:des/384713
cc: (via e-mail only)
Mr. Torren K. Pies
Mr. Louis J. Molepske
Mr. Paul Stroik

ORDINANCE
Amending the Revised Municipal Code
of the City of Stevens Point, Wisconsin

Authorization for the Creation of a Sewerage System

The Common Council for the City of Stevens Point, Portage County, Wisconsin does ordain as follows:

Section I. Section 3.35 of the Revised Municipal Code of the City of Stevens Point authorizing the creation of a sewerage system is hereby amended to read as follows:

3.35 – BOARD OF WATER & SEWERAGE COMMISSIONERS.

PREAMBLE

WHEREAS, the management of stormwater and other surface water discharges within and beyond the City is a matter that affects the health, safety and welfare of the City, its residents, its businesses, among others in the surrounding area; and that new land development will result in the need to manage additional stormwater runoff; and that areas of existing development require storm sewerage repair, maintenance and other drainage modifications; and

WHEREAS, failure to effectively manage stormwater affects the sanitary sewerage system operations of the City by, among other things, increasing the likelihood of infiltration and inflow into the sanitary sewerage system; and

WHEREAS, surface water runoff may cause erosion of lands, threaten businesses and residences, and other facilities with water damage and may create environmental damage to the rivers, streams and other bodies of water within and adjacent to the City; and

WHEREAS, a system for the collection and disposal of stormwater provides services to all properties within the City of Stevens Point and surrounding areas, including those properties not served by the stormwater collection system; and

WHEREAS, the cost of operating and maintaining the City stormwater management system and financing necessary repairs, replacements, improvements and extensions thereof should, to the extent practicable, be allocated in relationship to the services received from the system; and

WHEREAS, in order to protect the health, safety and welfare of the public, the Common Council hereby exercises its authority to establish a stormwater system and establish the rates for stormwater management services; and

WHEREAS, charges for these services may be established by the Common Council in an amount to meet the requirements for the construction, reconstruction, improvement, extension, operation, maintenance, repair, and depreciation of the stormwater system pursuant to Sec. 66.0821, Wis. Stats.

NOW THEREFORE, the Common Council of the City of Stevens Point, Wisconsin, do ordain as follows:

Section I. That Section 3.35(1) of the Revised Municipal Code of the City of Stevens Point is hereby amended to read as follows:

(1) That pursuant to Section 66.0805(6) and 66.0821 of the Wis. Stats., the Common Council of the City of Stevens Point shall exercise general control, and shall be responsible for the entire management and supervision and operation of the Water and Sewerage System. The governing body shall adopt such rules for the control and operation of the system as may be necessary. It shall through its agents keep books of accounts and records as prescribed by the Wisconsin Public Service Commission.

Section II. This ordinance shall take effect upon passage and publication according to law on January 1, 2013.

Approved:_____
Andrew J. Halverson, Mayor

Attest: _____
John V. Moe, Clerk

Dated _____

Passed _____

Published _____

COMPTROLLER-TREASURER REPORT
for the period ending January 31, 2012

	Bal Jan. 1, 2012	Receipts	Disbursements	Bal Jan. 31, 2012
GENERAL OPERATING CASH	$4,641,858.73	$11,227,884.51	$9,713,027.33	$6,156,715.91
WATER & SEWER (CASH & INVEST)	$6,893,946.40	$3,804,507.33	$3,211,638.00	$7,486,815.73

INVESTMENTS	Bal Jan. 1, 2012	TRANSFER IN	TRANSFER OUT	Bal. Jan. 31,2012
GENERAL	$29,344,987.28	$0.00	$0.00	$29,344,987.28
SPECIAL REVENUE	$701,008.87	$0.00	$0.00	$701,008.87
DEBT SERVICE	$7,390.21	$0.00	$0.00	$7,390.21
CAPITAL PROJECTS	$9,584,869.39	$0.00	$0.00	$9,584,869.39
ENTERPRISE	$235,008.28	$0.00	$0.00	$235,008.28
TRUST	$71,112.00	$0.00	$262.83	$70,849.17
TOTALS	$39,944,376.03	$0.00	$262.83	$39,944,113.20

EXPENDITURES:	BUDGET	YTD	%
GENERAL GOVT	$2,601,128.20	$217,124.17	8.35%
EMERGENCY GOVT	$1,133,797.00	$80,174.30	7.07%
POLICE	$4,859,458.00	$395,803.41	8.15%
FIRE	$4,794,475.00	$367,385.16	7.66%
PUBLIC WORKS	$5,791,871.00	$219,405.65	3.79%
PARK & REC	$2,260,870.00	$91,508.90	4.05%
CAPITOL PROG	$459,108.00	$0.00	0.00%
TRANSIT	$2,193,539.00	$63,490.04	2.89%
AIRPORT	$469,183.00	$41,649.01	8.88%
DEBT SERVICE	$4,475,293.00	$253,834.22	5.67%

REVENUES	BUDGET	YTD	%
GENERAL	$21,937,007.00	$1,371,401.59	6.25%
TRANSIT	$2,193,539.00	$63,490.04	2.89%
AIRPORT	$469,183.00	$41,649.01	8.88%