



PLANNING COMMISSION STAFF REPORT

Site plan review for Tumble Fresh laundry

FROM: Dan Olson, City Planner

TO: Planning Commission (for January 13 Meeting)

DATE: January 8, 2020

RE: PUBLIC HEARING – Site plan review request from Linn Investment Properties for a new Tumble Fresh laundry at 6023 – 42nd Avenue North (Application Number 2020-01)

A. BACKGROUND

Linn Investment Properties is proposing to purchase the property at 6023 – 42nd Avenue North, demolish the existing Sweet Taste of Italy restaurant building, and then construct a new Tumble Fresh laundry on the 28,500 square foot (0.6 acre) property. The property is zoned Commercial and personal services such as laundries are a permitted use within that zoning district. However the city's unified development code (UDC) requires site plan review and approval for the new building and site improvements. Notice of the January 13 public hearing was published in the Sun Post on January 2, mailed to owners within 500 feet (see attachment A), and posted to the Fair and Welcome neighborhoods on Nextdoor.

Attachments:

- A. Site location map showing public hearing notification area
- B. Existing zoning map
- C. Property photos
- D. Comment letter from neighboring property owner
- E. Project narrative submitted by applicant
- F. Site plan (18 sheets)

B. SITE PLAN REVIEW

Existing use – The property is the site of a 1,250 square foot commercial building constructed in 1963 and most recently operating as the Sweet Taste of Italy restaurant.

Adjacent uses

The following are the existing land uses and zoning districts surrounding this property:

- North – Across 42nd Avenue are businesses zoned Commercial
- East – Liquor store and single-family home (both zoned Commercial)
- West – Theater building zoned Commercial
- South – Single-family homes zoned Low Density Residential (R-1)

Proposed use - The applicant is proposing to demolish the existing building and then construct an approximately 4,700 square foot Tumble Fresh laundry with an associated parking lot. In addition the applicant will be requesting that the platted alley along the southern property line be vacated by the City Council and the land be incorporated into the site. The alley has never been constructed and the city has no plans to do so. The following are the notable site plan elements for this development:

- Building setbacks. The proposed building meets setback requirements in the Commercial district. The building will be approximately 15 feet from the property line along 42nd Avenue.
- Parking. The site plan shows 25 parking spaces to serve the proposed building, which meets the number of spaces required by the UDC. The parking lot also meets UDC requirements for setbacks and aisle dimensions.
- Stormwater management and erosion control measures. The site plan provides for a stormwater infiltration basin behind the proposed building. The percentage of impervious surface on the property will decrease from 82% to 56% (the maximum coverage is 85% for the commercial zoning district). During building construction, the city will require erosion control techniques to be used on-site including silt fences, rock construction entrances, and inlet protection.
- Utilities. The applicant is proposing to construct a new 6" water main parallel to 42nd Avenue from Adair Avenue to Brunswick Avenue. This new water main will connect to an existing water main dead end in Adair. Once the new water main is constructed, the applicant will connect to it to provide a water service connection to the proposed building. The portion of the new water main parallel to 42nd will be owned and maintained by the city. This method of construction is preferred due to the cost of tapping into the concrete main in 42nd Avenue. The service connection will cross the property at 6001 – 42nd Avenue (Adair Liquors). The two property owners at 6001 – 42nd and 6023 – 42nd have agreed to provide a drainage and utility easement to the city for this water main. The dedication of this easement has been made a condition of approval of the site plan.
- Access and circulation. The site plan shows that the property will continue to have two driveway accesses: one off of 42nd Avenue and the other off of Brunswick. The city's Public Works Director and the West Metro Fire Rescue District staff have reviewed this traffic circulation plan and found it adequate to meet vehicle movement into and within the site, including fire trucks.
- Building elevations. The proposed major exterior building material is "exterior insulation finishing system" (EIFS) with brick accents. These materials meet the city's requirements. A color rendering of the proposed building is attachment F.

- Landscaping. Currently there are no trees on the property. The landscape plan shows the new tree species to be planted as “thornless honeylocust”, “swamp white oak”, “American linden”, “American elm”, Norway spruce”, “white pine”, and “Japanese tree lilac”. The applicant proposes to plant three varieties of shrubs.
- Screening. Trash and recycling receptacles will be screened by a dumpster enclosure behind the building. The only ground mechanical equipment is a transformer that will be screened with landscaping. The applicant is proposing to screen the parking lot from the residential area to south with landscaping, including shrubs and trees.
- Fence requested by adjacent owner. Attachment D is a letter from a neighboring resident at 4170 Brunswick suggesting that a fence be installed on top of a reconstructed retaining wall to screen the commercial use from her property. Staff spoke with this resident to explain that the existing retaining wall is located within the alley that is proposed to be vacated and incorporated within the property. The applicant is proposing to remove the retaining wall, regrade the area, and then plant sod in the area that is now the alley. Staff has added a condition of approval that grading of the site cannot create adverse conditions for 4170 Brunswick.

The UDC requires screening of commercial parking lots from residential properties, but does not require a specific type of screening. Staff believes that the landscaping sufficiently screens the parking lot, therefore meeting the site plan criteria that residential uses are adequately protected (see section C, below). In addition, the property owner at 4170 Brunswick Avenue has the option of installing a fence on her property. However if the Planning Commission determines that this criteria is only met with the installation of a fence rather than landscaping, they can make that finding and add a condition of approval of the site plan that a fence be installed.

- Exterior Lighting. There are no existing light poles on the property. Three new poles will be installed. This lighting meets the city’s requirements.
- Pedestrian connections. There is an existing sidewalk along 42nd Avenue that allows for pedestrian connections to the new building. The applicant has added a pedestrian connection from this sidewalk to the proposed laundry.
- Signs. A monument sign is proposed facing 42nd Avenue. The applicant must receive sign permit approval before installing that sign, or any building signage.
- Vacuum center. The applicant is proposing to add an outdoor vacuum on the west side of the property for use by laundry patrons. The city does not have specific requirements for this use, but the applicant has provided information in attachment F to confirm the noise level of the vacuum will not disturb residential uses south of the property.

C. Site plan review criteria

The following are the relevant criteria for approval of site plans in city code section 510.17.

1. The site plan fully complies with all applicable requirements of the UDC.
Findings: As outlined in section B, above, the proposed site plan meets UDC requirements.
2. The site plan adequately protects residential uses from the potential adverse effects of a non-residential use.
Findings: The nearest residential properties are located south of the property at a distance of approximately 100 feet from the proposed laundry building to the nearest home. The proposed laundry is not expected to have an adverse effect on these residential properties.
3. The site plan is consistent with the use and character of surrounding properties.
Findings: The property has been an existing commercial use since at least 1963. Other buildings along 42nd Avenue are used for commercial or institutional uses. The proposed laundry is consistent with this character.
4. The site plan provides safe conditions for pedestrians or motorists and prevents the dangerous arrangement of pedestrian and vehicular ways.
Findings: The city's Public Works Director and staff from the West Metro Fire Rescue District have reviewed the site's traffic circulation plan and found it adequate to meet vehicle movement into and within the site, including fire trucks. An existing public sidewalk along 42nd Avenue provides pedestrian connections for the area, and the site plan provides for a sidewalk connection from the building to this sidewalk.

D. REQUESTED ACTION

The Planning Commission is being asked to make a recommendation to the City Council to either deny or approve the site plan review application to allow a new Tumble Fresh laundry at 6023 – 42nd Avenue North. This recommendation should include findings of fact either for or against the proposal. The Commission may reference the findings for approval in sections B and C, above. Staff recommends approval of the site plan review application with the following conditions:

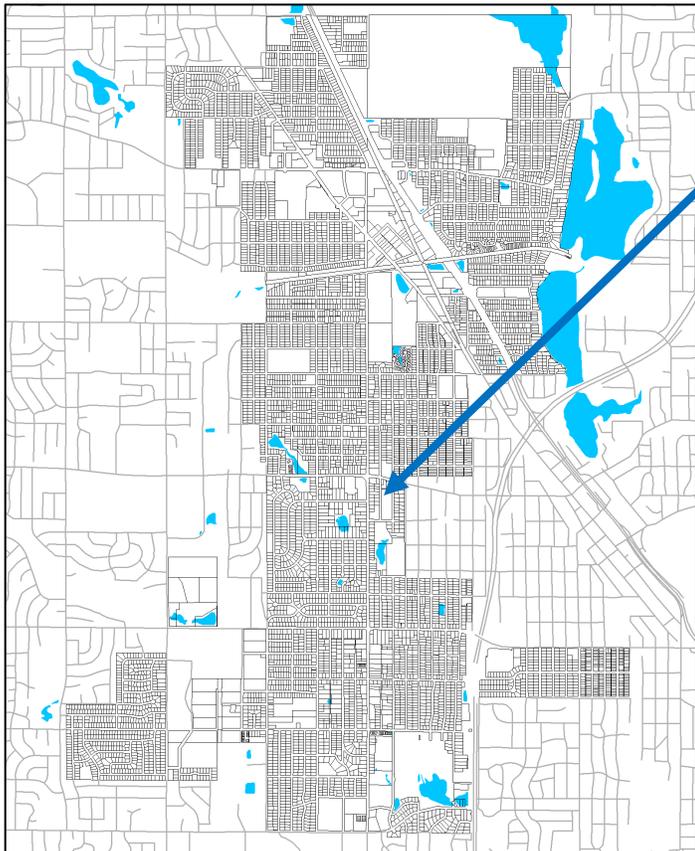
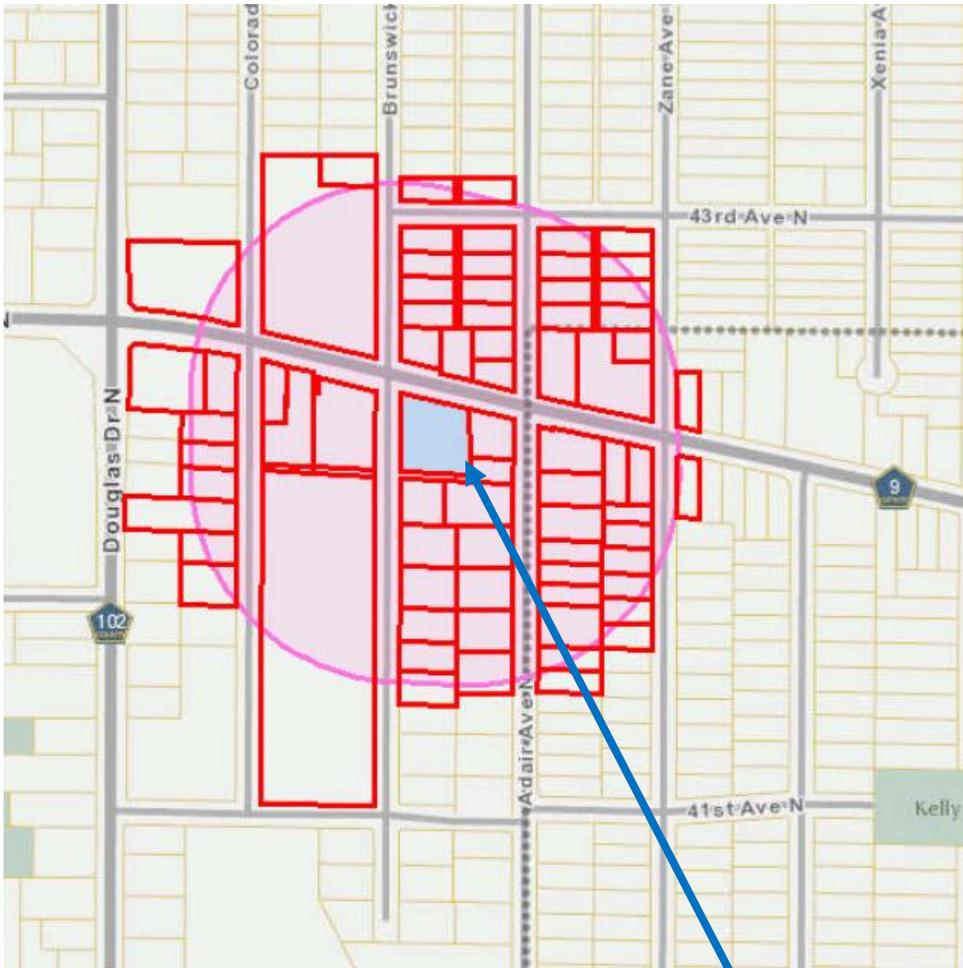
1. The development shall be constructed according to the site plan in attachment F. Prior to disturbing the site, the applicant shall sign a site improvement agreement with the city and provide an escrow to guarantee installation of the parking lot and landscaping plan.

2. The applicant receive approval from the City Council to vacate the platted alley along the southern property line.
3. Before the building permit is issued for the new building, the property owners of 6001 and 6023 – 42nd Avenue North shall dedicate and have recorded drainage and utility easements acceptable to the city parallel to 42nd Avenue for the new city water main.
4. The grading plan as submitted would require grading on the property at 4170 Brunswick Avenue North, or leave a basin that cannot drain on that property. Neither is permitted. Actual field grading shall be completed so that neither of those outcomes occurs.

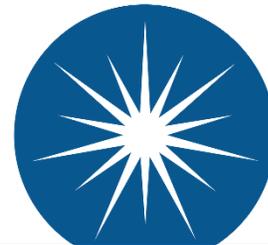
City Council action is anticipated on January 21, 2020.

Site Location and Public Hearing Notice Mailing Map

Attachment A



6023 – 42nd Ave. N



CITY of CRYSTAL

**4141 Douglas Dr. N.
Crystal MN 55422**

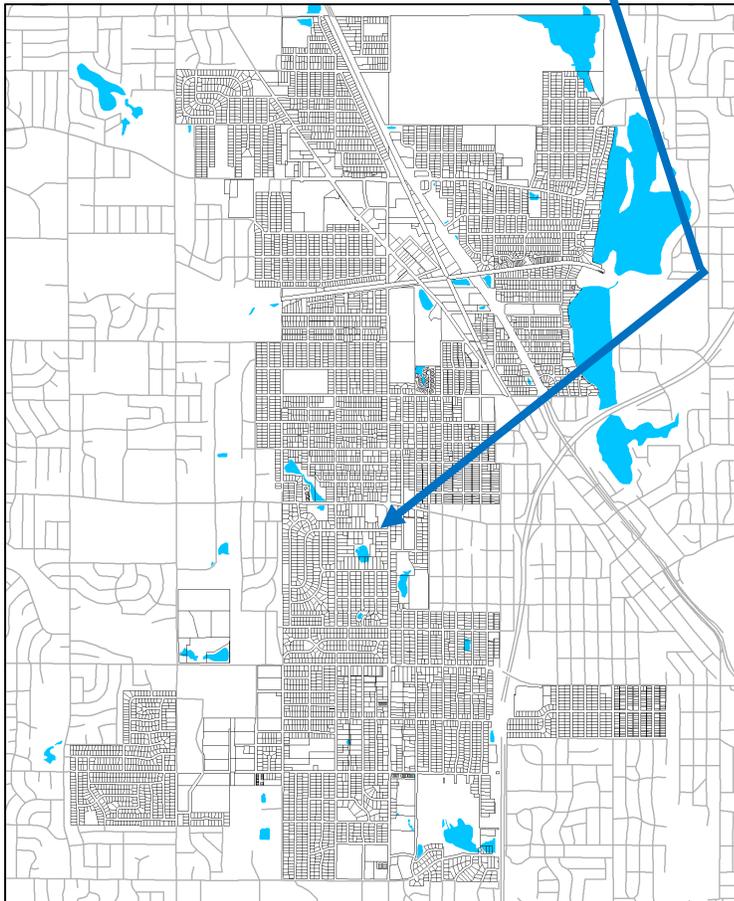
Zoning Map

Attachment B



ZONES:

- R-1 LOW DENSITY RESIDENTIAL
- R-2 MEDIUM DENSITY RESIDENTIAL
- R-3 HIGH DENSITY RESIDENTIAL
- C - COMMERCIAL
- I - INDUSTRIAL
- AP - AIRPORT DISTRICT



6023 – 42nd Ave. N



CITY of CRYSTAL

4141 Douglas Dr. N.
Crystal MN 55422

Attachment C





After 30 years. The La

6023



M FASHIONS

Cakes & Treats

TOBACCO

E-CIGS
CENTER

NO PARKING
FIRE LANE

PEPSI

This is regarding the Site PLAN Review for
6023 - 42nd Ave N CRYSTAL MN.

My name is Louise Goels and live at 4170
Brunswick Ave N Crystal MN. I probably will not
be able to attend the meeting on January 13, 2020 of
the Planning Commission of City of Crystal, so I am
submitting written comments/questions.

My property is the lot south of and next to the
6023 - 42nd Ave N property. I am not opposed to a new
laundry being built but I do have concerns.

First is the potential for loitering. It would be
a worn, enclosed building with seats available,
vending machines and mostly unmanned by owners.
Yes I did read about the owners stopping in several
times a day and the presence of video cameras. I
am still apprehensive.

My other concern is the retaining wall that butts
up against the north side of my property. This
topic is probably specific to me and my property
but is still important.

I understand the City of Crystal wants to vacate
the existing platted alley behind the 6023 property
which includes the retaining wall. This alley was
never developed by the City of Crystal, I am
assuming the land is part of the purchase and
development by LINN Investment Properties.
Will the current retaining wall be replaced?
I could not tell by the site plan. If not - why not?

If it is being replaced will it be finished when the Tunnel Fresh opens? How will the retaining wall be built? Using landscaping blocks? Will there be some water drainage system? There was no information on these topics.

There will be additional noise, lights at night and activity on the property. A fence on top of the retaining wall would keep those issues to a minimum. A fence also would be a continuation of fencing already present along the same retaining wall but at the homeowners property directly behind my property.

I will appreciate any time taken to reply to me answers to my comments/questions. Please feel free to contact me by phone or email.

Louise Anne Goede
4170 BRUNSWICK AVE N
Crystal, MN 55422

Phone: 763 537 1984
email: louisegoede@
excite.com



Tumble Fresh Coin Laundry is a Minnesota born, expanding regional chain of self-service laundromats started in 2010 by Stephen Linn of the Linn Companies offering new levels of amenities and an environment that is inviting, comfortable and convenient. With six locations currently established and four, including this location, planned for a 2020 opening, Tumble Fresh Coin Laundry has emerged as the largest chain of luxury laundromats in the Midwest.

The three most recent stores completed at the end of 2018 / start of 2019 showcase the latest established design that has set the standard moving forward, both inside and out. Examples of the Blaine and Hudson locations are included which illustrate the level of detail, quality and craftsmanship as well as the individuality that are inherent in the brand and are a part of the identity of Tumble Fresh Coin Laundry. All new Tumble Fresh Coin Laundry sites, going forward, will be executed in this fashion.

The exterior uses a mix of materials including several brick colors, simulated stone, EIFS and glass that are articulated in a manner to emphasize signage and entry points. The intent is to break up the larger mass of the building to create visual interest, further accentuating it by use of decorative light fixtures and fabric awnings. These various elements contribute towards the graphic identity of a Tumble Fresh Coin Laundry. Key sign areas, typically with an arch, have an accent blue band in addition to an LED light tube accent for added interest.

Some key exterior elements include a monument sign with an electronic message center which not only creates a presence at the street level but allows for added, professionally created, marketing of current specials and messaging. An exterior car vacuum station provides an added on-site amenity for patrons to utilize while doing laundry. There are exterior seating areas that provide added waiting opportunities, all of which are very accessible and within view of the interior. A small trash enclosure with screening materials, in keeping with the building look and feel, is present along with numerous exterior trash and ash bins to make it easy for customers to self-regulate their trash. Entry bollards not only provide an increased secure barrier for pedestrian friendly zones along the building, but they allow for a zero curb line that is often more user friendly, minimizing slip and fall hazards.

Key interior elements include functional aspects related to self-service laundry and unique areas to help pass the time while the machines do their work. Typically, dryer banks are located along the perimeter with washer banks centralized. A customer lounge area offers an isolated area where guests can access vending machines with snacks, beverages and a game or a toy for a child, while still being open and visible through windows to the exterior and glass to the main laundry area. A community table within the main space provides a location where guests can get some work done or merely gather with friends and family. The community table includes the added convenience of power for charging of devices, such as phones and laptops. There is additional furniture located throughout the store, be it benches with a range of seats, multiple refuse bins or folding tables. There is a merchandise dispenser for soaps or fabric softeners as well as several bill changers to provide coin for those who prefer cash. All equipment, however, is fully digital, allowing the use of all credit cards or can be accessed / purchased via the Tumble Fresh Coin Laundry app, powered by Fascard. A hand wash station provides an area for easy clean up from detergents, an area to address a delicate item or a stubborn stain. Toilet rooms include baby changing stations as well as touchless fixtures with a maintenance free, well-lit interior, including occupancy sensors for interior lights.

Each store contains an office for staff to provide necessary services or other onsite business functions. A comment card box is available for customer feed-back and concerns. A series of cameras and other security measures work with the building automation system to keep customers and employees safe. The automation system monitors and secures doors, verifies store occupants, controls lighting, plays audio messaging, activates and deactivates the alarm system as well as providing other security aspects, allowing the store to operate un-manned in the physical sense. Security monitors greet patrons as a deterrent and to provide peace of mind. Security cameras throughout the interior and exterior are recorded with DVR technology providing remote viewing, playback and investigative information. Cleaning by staff occurs frequently one to four times a day, depending on the day and level of activity, to keep things exceptionally clean. A janitor's closet provides access to key items as well as a home for a floor scrubber. All Tumble Fresh Coin Laundry locations offer ATM's with the Minnesota stores also offering lottery tickets through Minnesota's Lottery vending equipment. Several service areas for equipment or support items, such as water heaters, water softener, gas lines, exhaust ductwork, lint interceptor and roof access, make up the balance of the store. Dryer exhaust typically exits the building through the rear wall with the vent hoods being painted to match the adjacent surface minimizing their presence. Future dryer expansion area will vent through the roof. Locations of the central part of the roof, like the rtu's are effectively screened by the parapets with the visual angle from grade.

The interior environment composed of the equipment and seating incorporates a polished concrete floor with an undulating pattern that plays off the open ceiling with articulated circular soffit areas and accent lighting. Walk off mats at the entries help deal with winter climate conditions including snow, salt and sand. A range of lighting helps the store stay well-lit and visually interesting as do the wide range of graphics and sign elements throughout, reinforcing the visual identity of the brand. Warm wood tones help frame equipment and provide a wainscot with wall bumper to ward off rouge carts.

All Tumble Fresh Coin Laundry locations are open during the hours of 5:00 am to 1:00 am providing unmatched convenience within the industry. Most services on site including, management, cleaning, grounds maintenance, equipment repair and preventive maintenance are performed by direct employees of the Linn Companies or it's business unit, Tumble Fresh Coin Laundry.

All Tumble Fresh Coin Laundry properties are developed and owned by Linn Investment Properties, LLC, a business unit of the Linn Companies. From property investment to building design to construction development and ultimately operations, Tumble Fresh Coin Laundry takes pride in what they do every step of the way. It is clear why today Tumble Fresh Coin Laundry is the fastest growing chain of luxury laundromats in the Midwest.



TUMBLE
fresh
COIN LAUNDRY





TUMBLE
fresh
COIN LAUNDRY

2303

2303

Handicapped parking sign

NO PARKING

VALENTINE'S



Tumble Dry
COIN LAUNDRY

2305

2301

2302

2303



TUMBLE
fresh

COIN LAUNDRY

AutoZone





TUMBLE
fresh
COIN LAUNDRY







TACO BELL
Drive Thru

Caribona COFFEE

15 MIN
PARKING

Jimmy John's

VACUUM
PARKING
ONLY

VACUUM
PARKING
ONLY



10501

TUMBLE
fresh
COIN LAUNDRY

10501

♿
ACCESSIBLE
SERVICES OR
EQUIPMENT
AVAILABLE
FOR THE HANDICAPPED
CALL 800-368-7029
VAN
ACCESSIBLE
HOURS OF
OPERATION
SEE SIGNAGE
FOR DETAILS

TUMBLE
fresh
COIN
LAUNDRY

ALL!
MACHINES
ACCEPT
CREDIT CARDS



PARK ONLY





**COIN
LAUNDRY**



It all comes out
IN THE WASH.

Throw in the
TOWEL.

TUMBLE
fresh

**Giant
LOAD
MACHINES**

WASH AND DRY THE BIGGEST

- COMFORTERS
- BLANKETS
- BEDSPREADS
- SLEEPING BAGS
- QUILTS
- BULKY ITEMS

3
You will receive a 6-digit
confirmation code in your
email you signed up with.

NOTICE

STATION



TUMBLE
fresh
COIN LAUNDRY

TUMBLE
fresh

Giant
LOAD
MACHINES

WASH AND DRY THE BIGGEST

- COMFORTERS
- BLANKETS
- BEDSPREADS
- SLEEPING BAGS
- QUILTS
- BULKY ITEMS

TUMBLE
fresh
COIN LAUNDRY

VISITING

TUMBLE
fresh

Guest LOUNGE



RESTROOMS

It all comes out
IN THE WASH.

Throw in the
TOWEL

SOAP CENTER

SOAP
BULB
FOOTBATH
LAUNDRY BAGS

TUMBLE

CHANGERS

CHANGERS

WASHER
LAUNDRY OPS
DIESEL

Giant LOAD MACHINES

WASH AND DRY THE BIGGEST

- COMFORTERS
- BLANKETS
- BEDSPREADS
- SLEEPING BAGS
- QUILTS
- BULKY ITEMS





DUNGE

RESTROOMS

WASH.

BLE
fresh

Let's get ready to
TUMBLE!

HAND WASH STATION



Let's get ready to
TUMBLE!

HAND WASH STATION

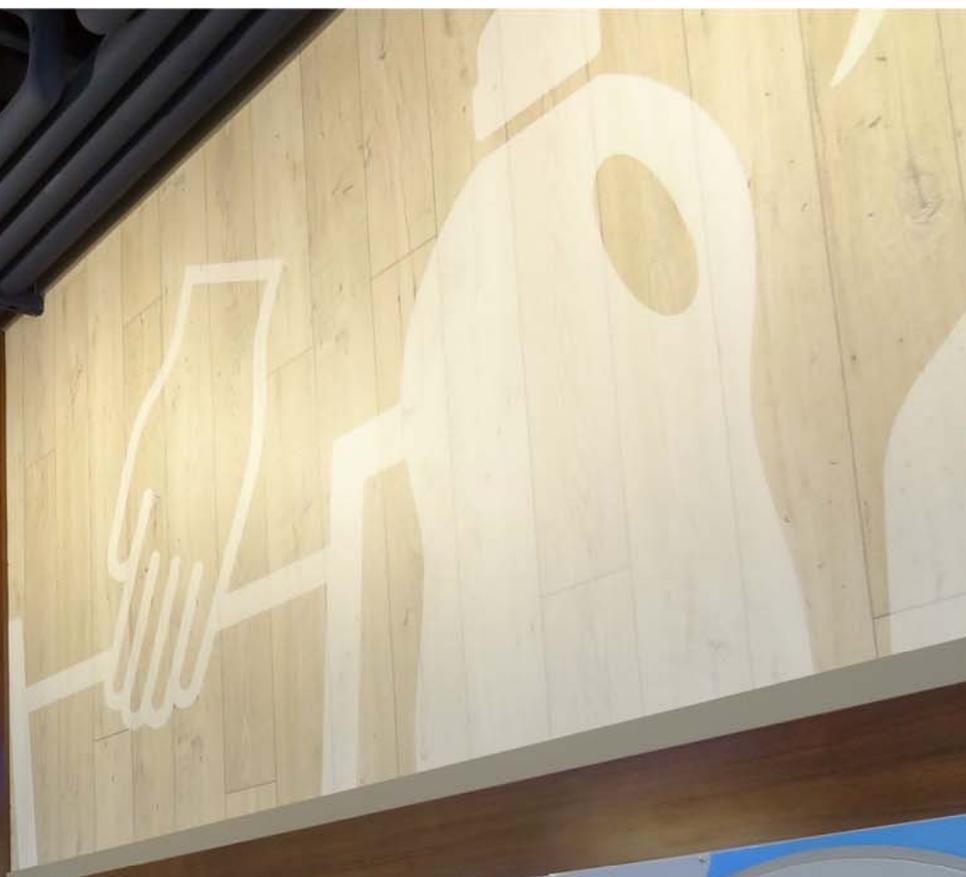
LET'S WASH.

LAUNDRY 101
TIPS

BREXIT?
SOON UK PARLIAM
No Robertson



TUMBLE
fresh



THE WASH.

LAUNDRY TIPS

DRYER INSTRUCTIONS



Laundry is THE CYCLE OF LIFE

Guest LOUNGE



SOAP CENTER

SOAP
BLEACH
SOFTENERS
LAUNDRY BAGS

ALL THE BRANDS IN ONE PLACE
Starting at \$1.75









Preliminary Site Development Plans

for

Tumble Fresh

Coin Operated Laundry

Crystal, Minnesota

Presented by:

Linn Investment Properties, LLC

Attachment F

Client
LINN INVESTMENT PROPERTIES, LLC

Project
TUMBLE FRESH

Location
CRYSTAL, MN

6023 42ND AVE N

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Minnesota.

Joshua E. Baker
Registration No. 12179 Date: MM/DD/2019
If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

Summary

Designed: MJJ Drawn: MJJ
Approved: JEB Book / Page:
Phase: PRELIMINARY Initial Issue: 12/17/2019

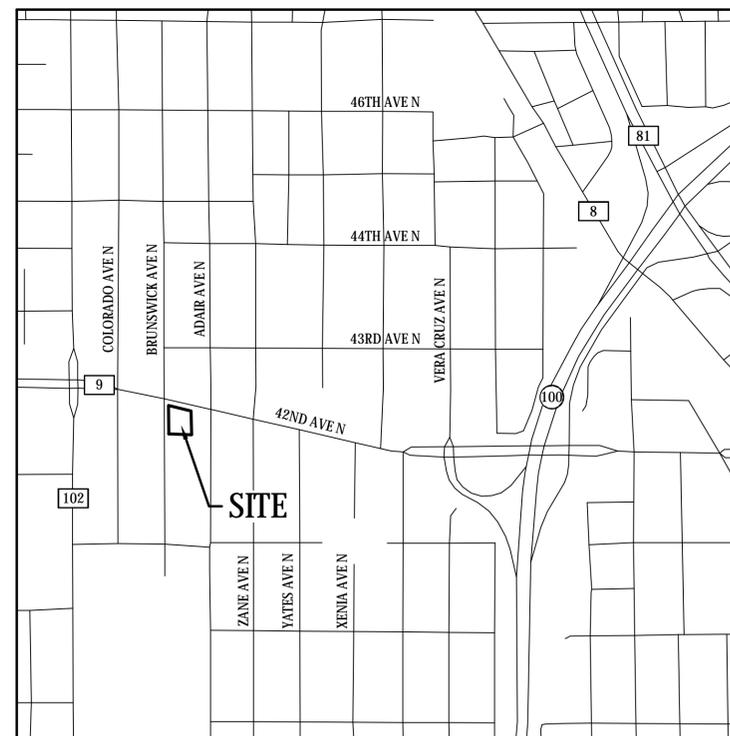
Revision History

No.	Date	By	Submission / Revision
1	01/02/20	AJR	CITY COMMENTS

Sheet Title
TITLE SHEET

Sheet No. Revision
C1.01

Project No. 21978



VICINITY MAP
NO SCALE

SHEET INDEX	
SHEET	DESCRIPTION
C1.01	TITLE SHEET
C2.01	EXISTING CONDITIONS PLAN
C2.02	DEMOLITION PLAN
C3.01	SITE PLAN
C4.01	GRADING PLAN
C5.01	PHASE I EROSION CONTROL PLAN
C5.02	PHASE II EROSION CONTROL PLAN
C5.03	EROSION CONTROL NOTES & DETAILS
C6.01	UTILITY PLAN
C9.01	DETAILS
C9.02	DETAILS
L1.01	LANDSCAPE PLAN
L1.02	LANDSCAPE DETAILS AND NOTES
X1.01	VACUUM NOISE EXHIBIT
X1.02	LIGHTING PHOTOMETRIC
A2.1	PROPOSED FLOOR PLAN
A3.1	EXTERIOR ELEVATIONS
A3.2	EXTERIOR RENDERING

GOVERNING SPECIFICATIONS

CITY ENGINEER'S ASSOCIATION OF MINNESOTA STANDARD SPECIFICATIONS (2013)
MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION (2018 EDITION)

CONSULTANT CONTACT LIST:

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CONTACT: STEPHEN LINN

CIVIL ENGINEER
SAMBATEK
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MINNETONKA, MN 55343
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13400 15TH AVE N
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BRETT.LARSEN@TERRACON.COM
CONTACT: BRETT LARSEN

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12800 WHITEWATER DRIVE, SUITE 300
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WDELANEY@SAMBATEK.COM
CONTACT: WILLIAM DELANEY

ENVIRONMENTAL
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PLYMOUTH, MN 55441-4532
TEL 763-489-3166
JENNIFER.FORCE@TERRACON.COM
CONTACT: JENNIFER FORCE

Client
LINN
INVESTMENT
PROPERTIES, LLC

Project
TUMBLE FRESH

Location
CRYSTAL, MN

6023 42ND AVE N

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Minnesota.

Joshua E. Baker
Registration No. 1979 Date: MM/DD/2019
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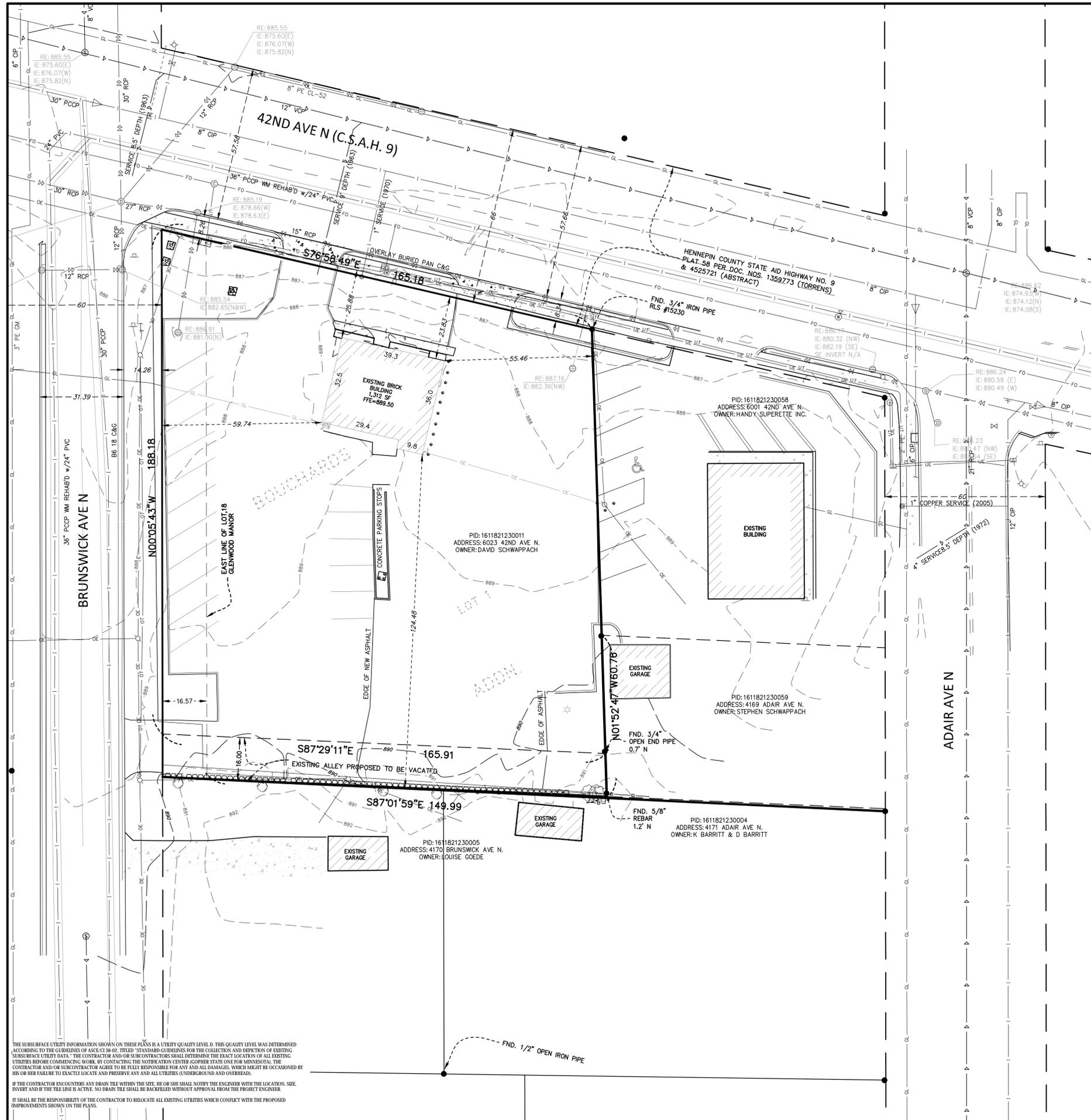
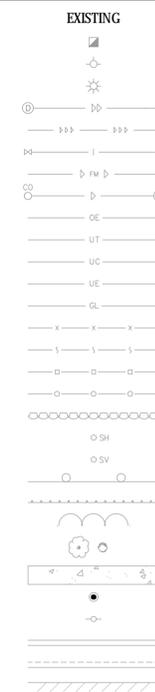
Sheet Title
EXISTING
CONDITIONS
PLAN

Sheet No. Revision
C2.01

Project No. 21978

LEGEND

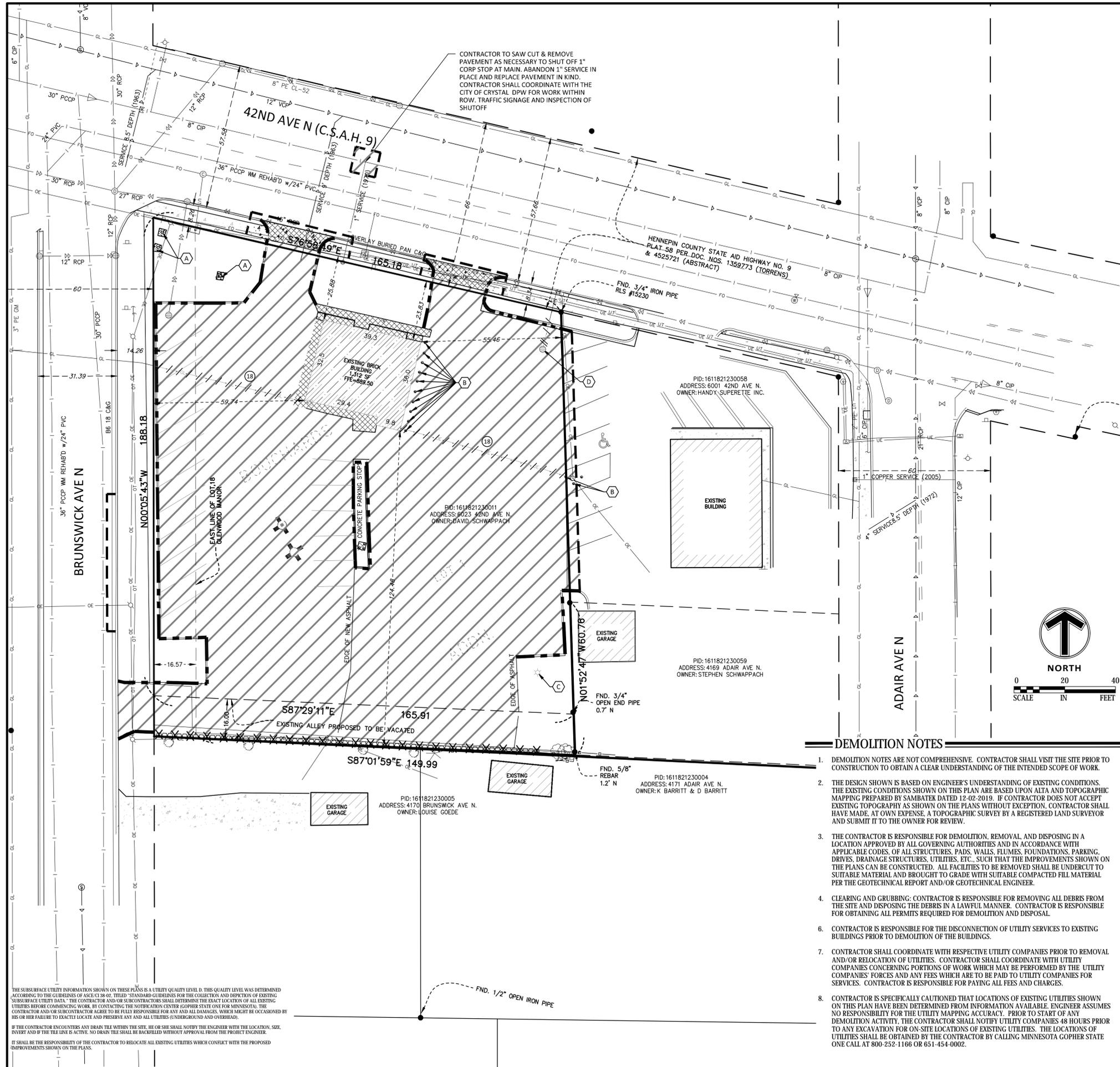
- GAS METER
- HYDRANT
- LIGHT
- STORM SEWER
- DRAIN TILE
- WATERMAIN
- FORCE MAIN
- SANITARY SEWER
- OVERHEAD ELECTRIC
- UNDERGROUND TELEPHONE
- UNDERGROUND CABLE TV
- UNDERGROUND ELECTRIC
- UNDERGROUND GAS
- WIRE FENCE
- IRON FENCE
- WOOD FENCE
- CHAIN LINK FENCE
- STONE RETAINING WALL
- SPRINKLER HEAD
- SPRINKLER VALVE
- GUARD RAIL
- HANDRAIL
- EDGE OF TREES
- TREES / SHRUBS
- CONCRETE
- GUARD POLES
- SIGNS
- CONCRETE CURB
- BITUMINOUS CURB
- BUILDING



THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. BY CONTRACTING THE WORKER UNDER GOVERNMENT ONE FOR MINNESOTA, THE CONTRACTOR AND/OR SUBCONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY OBSTACLE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND IF THE UTILITY IS ACTIVE, NO OBSTACLE SHALL BE ACCEPTED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



LEGEND

Symbol	Description
	GAS METER
	HYDRANT
	LIGHT
	STORM SEWER
	DRAIN TILE
	WATERMAIN
	FORCE MAIN
	SANITARY SEWER
	OVERHEAD ELECTRIC
	UNDERGROUND TELEPHONE
	UNDERGROUND CABLE TV
	UNDERGROUND ELECTRIC
	UNDERGROUND GAS
	WIRE FENCE
	IRON FENCE
	WOOD FENCE
	CHAIN LINK FENCE
	STONE RETAINING WALL
	SPRINKLER HEAD
	SPRINKLER VALVE
	GUARD RAIL
	HANDRAIL
	EDGE OF TREES
	TREES / SHRUBS
	CONCRETE
	GUARD POLES
	SIGNS
	CONCRETE CURB
	BITUMINOUS CURB
	BUILDING
	REMOVE EXISTING UTILITY LINE
	REMOVE EXISTING CONCRETE CURB
	SAW CUT EXISTING CONCRETE OR BITUMINOUS PAVEMENT
	REMOVE EXISTING BITUMINOUS PAVEMENT
	REMOVE EXISTING CONCRETE PAVEMENT
	REMOVE EXISTING BUILDING
	REMOVE STONE RETAINING WALL

KEY NOTES

- REMOVE EXISTING ELECTRONIC SIGN, CONDUIT & BASE
- REMOVE EXISTING BOLLARD
- REMOVE LIGHTING UNIT, BASE & CONDUIT
- REMOVE EXISTING DRAINAGE STRUCTURE
- THE MAPPING LOCATION OF ALL EXISTING SEWERS, PIPING, AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH WORK. UTILITIES DETERMINED TO BE ABANDONED SHALL BE REMOVED IF UNDER THE BUILDING INCLUDING 10' BEYOND FOUNDATIONS.
- ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY DURING CONSTRUCTION.
- CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., TO THE BEST PRACTICES.
- CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.
- PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED AND APPROVED BY THE LOCAL AUTHORITY.
- CONTRACTOR SHALL LIMIT SAW-CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
- CONTRACTOR TO PROTECT EXISTING FEATURES WHICH ARE TO REMAIN. DAMAGE TO ANY EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
- ABANDON OR REMOVE ALL SANITARY, WATER AND STORM SERVICES PER CITY STANDARDS. COORDINATE ALL WORK WITH CITY. ALL STREET RESTORATION SHALL BE COMPLETED IN COMPLIANCE WITH LOCAL STANDARDS.
- CONTRACTOR SHALL PREPARE AND SUBMIT TO THE GOVERNING AUTHORITY A TRAFFIC AND/OR PEDESTRIAN TRAFFIC PLAN PER CITY/COUNTY/STATE STANDARDS TO BE APPROVED BY THE LOCAL GOVERNING AUTHORITY.
- CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING PLANS TO IDENTIFY LIMITS OF REMOVALS.

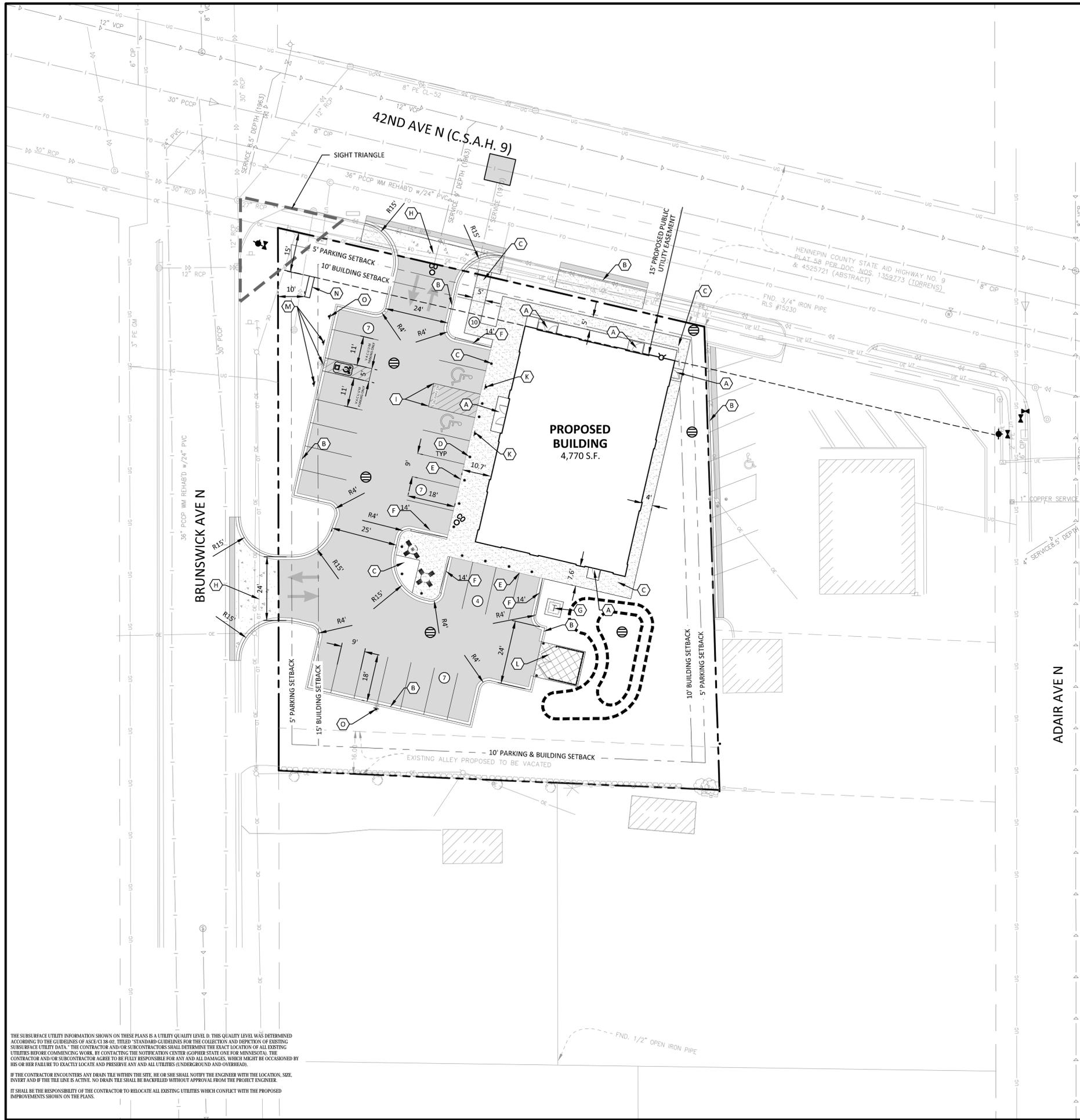
DEMOLITION NOTES

- DEMOLITION NOTES ARE NOT COMPREHENSIVE. CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION TO OBTAIN A CLEAR UNDERSTANDING OF THE INTENDED SCOPE OF WORK.
- THE DESIGN SHOWN IS BASED ON ENGINEER'S UNDERSTANDING OF EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON ALTA AND TOPOGRAPHIC MAPPING PREPARED BY SAMBATEK DATED 12-02-2019. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS WITHOUT EXCEPTION, CONTRACTOR SHALL HAVE MADE, AT OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
- THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES AND IN ACCORDANCE WITH APPLICABLE CODES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE GEOTECHNICAL REPORT AND/OR GEOTECHNICAL ENGINEER.
- CLEARING AND GRUBBING: CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
- CONTRACTOR IS RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO EXISTING BUILDINGS PRIOR TO DEMOLITION OF THE BUILDINGS.
- CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO REMOVAL AND/OR RELOCATION OF UTILITIES. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANIES' FORCES AND ANY FEES WHICH ARE TO BE PAID TO UTILITY COMPANIES FOR SERVICES. CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
- CONTRACTOR IS SPECIFICALLY CAUTIONED THAT LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM INFORMATION AVAILABLE. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE UTILITY MAPPING ACCURACY. PRIOR TO START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES 48 HOURS PRIOR TO ANY EXCAVATION FOR ON-SITE LOCATIONS OF EXISTING UTILITIES. THE LOCATIONS OF UTILITIES SHALL BE OBTAINED BY THE CONTRACTOR BY CALLING MINNESOTA GOPHER STATE ONE CALL AT 800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CONTACTING THE WATERWORKS CENTER GOPHER STATE ONE FOR MINNESOTA. THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRABN THE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND OF THE LINE IS ACTIVE. NO DRABN THE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



LEGEND

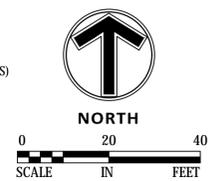
PROPERTY LIMIT	PROPOSED	EXISTING	STANDARD DUTY ASPHALT PAVING
CURB & GUTTER	---	---	HEAVY DUTY CONCRETE PAVING
EASEMENT	---	---	CONCRETE PAVING
BUILDING	---	---	CONCRETE SIDEWALK
RETAINING WALL	---	---	LIGHTING BY OTHERS
WETLAND LIMITS	---	---	
TREELINE	---	---	
SIGN	●		
PIPE BOLLARD	○		
NUMBER OF PARKING STALLS PER ROW	⊗		
KEY NOTE	⊗		

DEVELOPMENT SUMMARY

AREA		
SITE AREA	30,626 SF	0.70 AC
EXISTING IMPERVIOUS COVERAGE	26,955 SF	0.62 AC
PROPOSED IMPERVIOUS COVERAGE	18,190 SF	0.42 AC
BUILDING SETBACKS		
FRONT YARD	10 FEET	
REAR YARD	10 FEET	
SIDE YARD	10 FEET	
CORNER SIDE YARD	15 FEET	
PARKING SETBACKS		
FRONT YARD	5 FEET	
REAR YARD	5 FEET	
SIDE YARD	5 FEET	
ZONING		
EXISTING ZONING	COMMERCIAL	
PROPOSED ZONING	COMMERCIAL	
PARKING SUMMARY		
TOTAL PARKING REQUIRED	14 > STALLS < 23	
TOTAL PARKING PROVIDED	25 STALLS	
ADA PARKING REQUIRED	2 STALLS	
ADA PARKING PROVIDED	2 STALLS	

- DEVELOPMENT NOTES**
- ALL DIMENSIONS ARE ROUNDED TO THE NEAREST TENTH FOOT.
 - ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
 - CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "GUTTER OUT" WHERE WATER DRAINS AWAY FROM CURB. ALL OTHER AREAS SHALL BE CONSTRUCTED AS "GUTTER IN" CURB. COORDINATE WITH GRADING CONTRACTOR.
 - ALL AREAS ARE ROUNDED TO THE NEAREST SQUARE FOOT.
 - ALL PARKING STALLS TO BE 9' IN WIDTH AND 18' IN LENGTH UNLESS OTHERWISE INDICATED.
 - CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF EXIT PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
 - SEE ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS
 - SEE ARCHITECTURAL PLANS FOR LIGHT POLE FOUNDATION DETAIL AND FOR EXACT LOCATIONS OF LIGHT POLE.
 - REFER TO FINAL PLAT FOR LOT BOUNDARIES, LOT NUMBERS, LOT AREAS, AND LOT DIMENSIONS.
 - ALL GRADIENTS ON SIDEWALKS ALONG THE ADA ROUTE SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5% (1:20), EXCEPT AT CURB RAMPS (1:12), AND A MAXIMUM CROSS SLOPE OF 2.08% (1:48). THE MAXIMUM SLOPE IN ANY DIRECTION ON AN ADA PARKING STALL OR ACCESS AISLE SHALL BE 2.08% (1:48). THE CONTRACTOR SHALL REVIEW AND VERIFY THE GRADIENT IN THE FIELD ALONG THE ADA ROUTES PRIOR TO PLACING CONCRETE OR BITUMINOUS PAVEMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THERE IS A DISCREPANCY BETWEEN THE GRADIENT IN THE FIELD VERSUS THE DESIGN GRADIENT AND COORDINATE WITH GRADING CONTRACTOR.
 - "NO PARKING" SIGNS SHALL BE PLACED ALONG ALL DRIVEWAYS AS REQUIRED BY CITY.
 - PARKING NEEDS FOR A TUMBLE FRESH COIN LAUNDRY ARE GREATER THAN MANY OTHER RETAIL OR SERVICE RELATED BUSINESSES DUE TO THE FOLLOWING FACTORS:
 - NEARLY ALL PATRONS DRIVE TO A LAUNDROMAT IN ORDER TO HAUL IN AND OUT THEIR LAUNDRY.
 - AVERAGE TIME IN A LAUNDROMAT GENERALLY EXCEEDS ONE HOUR WHICH RESULTS IN LESS TURNOVER OF PARKING SPACES.
 - BUSINESS IS NOT EVENLY SPREAD OUT WHICH CREATES A LARGER PARKING NEED ON BUSIER DAYS, AS APPROXIMATELY 50% OF A LAUNDROMATS WEEKLY BUSINESS IS CONDUCTED ON SATURDAY AND SUNDAY.
 - EMPLOYEES ARE LIMITED TO 1 PART-TIME EMPLOYEE AS-NEEDED PLUS MAINTENANCE STAFF.

- KEY NOTES**
- BUILDING, STOOPS, STAIRS (SEE ARCHITECTURAL PLANS)
 - B-612 CONCRETE CURB AND GUTTER (SEE DETAIL 01, SHEET C9.01)
 - CONCRETE SIDEWALK (SEE DETAIL 04, SHEET C9.01)
 - CONCRETE PIPE BOLLARD (SEE DETAIL 10, SHEET C9.01)
 - INTEGRAL CURB & SIDEWALK (SEE DETAIL 06, SHEET C9.01)
 - CURB TRANSITION FROM FLUSH CURB TO B-612 (SEE DETAIL 07, SHEET C9.01)
 - CONCRETE TRANSFORMER PAD (BY OTHERS)
 - COMMERCIAL DRIVEWAY (SEE CITY DETAIL, SHEET C9.02)
 - ACCESSIBLE STALL STRIPING (SEE DETAIL 08 & 09, SHEET C9.01)
 - ACCESSIBLE PARKING SIGN (SEE DETAIL 11, SHEET C9.01)
 - TRASH ENCLOSURE (SEE ARCHITECTURAL PLANS)
 - VACUUM ISLAND & PARKING SIGNAGE (SEE ARCHITECTURAL PLANS)
 - MONUMENT SIGN (SEE ARCHITECTURAL PLANS)
 - NO LOTTERING SIGNAGE



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IF THE CONTRACTOR ENCOUNTERS ANY DRABN THE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND IF THE LINE IS ACTIVE, NO DRABN THE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

Client
LINN INVESTMENT PROPERTIES, LLC

Project
TUMBLE FRESH

Location
CRYSTAL, MN

6023 42ND AVE N

Certification
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Minnesota.

Joshua E. Baker
Registration No. 1979 Date: MM/DD/2019
If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

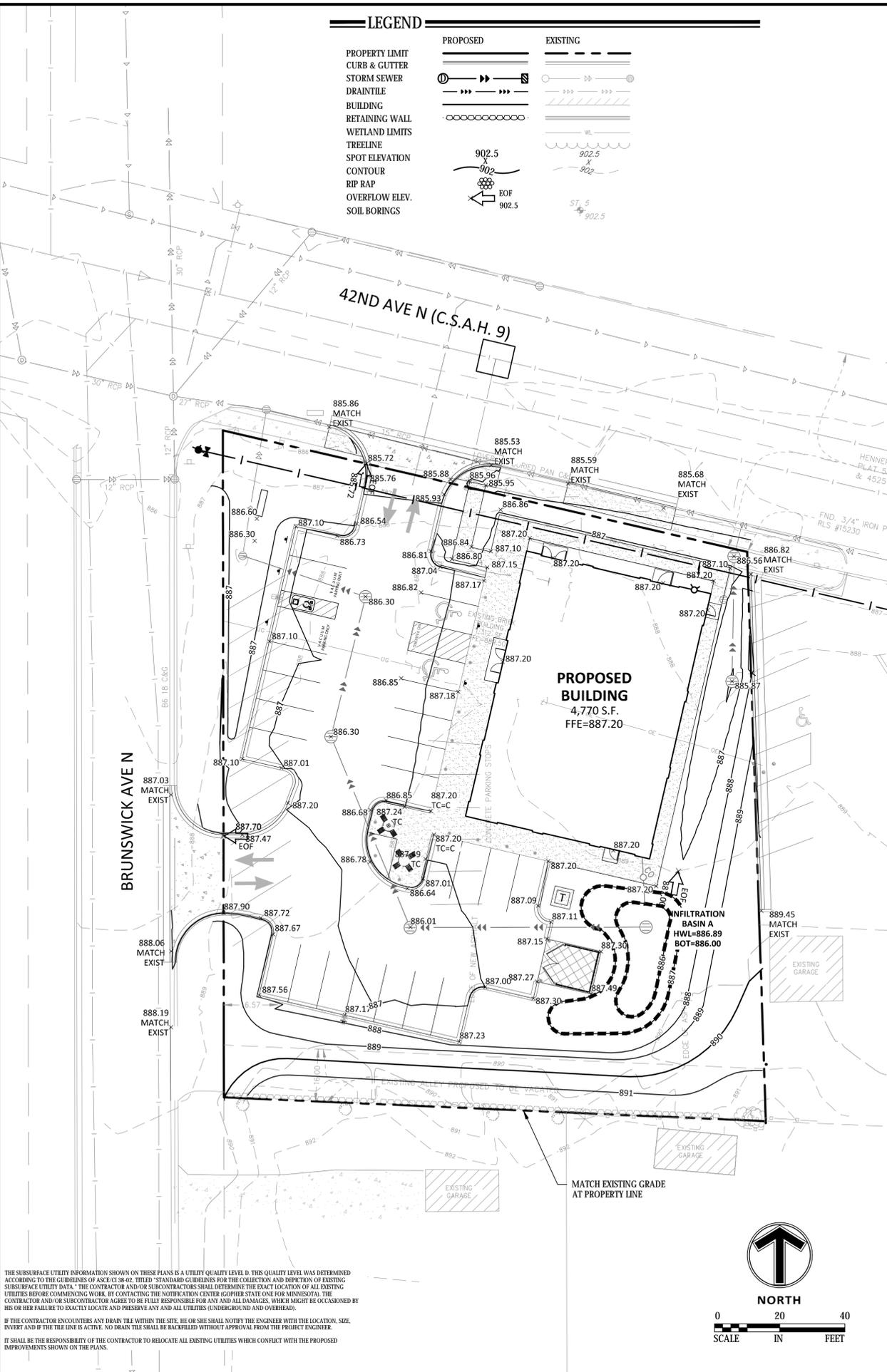
Summary
Designed: MJJ Drawn: MJJ
Approved: JEB Book / Page:
Phase: PRELIMINARY Initial Issue: 12/17/2019

Revision History
No. Date By Submittal / Revision
1 01/02/20 AJR CITY COMMENTS

Sheet Title
SITE PLAN

Sheet No. Revision
C3.01

Project No. 21978



THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. BY CONTACTING THE NOTIFICATION CENTER GOVERNS STATE ONE FOR MINNESOTA, THE CONTRACTOR AND/OR SUBCONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRABN THE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND OF THE TYPE OF UTILITY. NO DRABN THE SHALL BE BULLDOZED THROUGH AT ANY TIME BY THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

GRADING NOTES

- PROPOSED CONTOURS ARE TO FINISHED GRADE ELEVATION. SPOT ELEVATIONS ALONG PROPOSED CURB DENOTE GUTTER GRADE.
 - CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "GUTTER OUT" WHERE WATER DRAINS AWAY FROM CURB. ALL OTHER AREAS SHALL BE CONSTRUCTED AS "GUTTER IN" CURB.
 - ALL GRADIENT ON SIDEWALKS ALONG THE ADA ROUTE SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5% (1:20), EXCEPT AT CURB RAMPS (1:12) AND A MAXIMUM CROSS SLOPE OF 2.08% (1:48). MAXIMUM SLOPE IN ANY DIRECTION ON AN ADA PARKING STALL OR ACCESS AISLE SHALL BE IN 2.08% (1:48). CONTRACTOR SHALL REVIEW AND VERIFY THE GRADIENT IN THE FIELD ALONG THE ADA ROUTES PRIOR TO PLACING CONCRETE OR BITUMENUS. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THERE IS A DISCREPANCY BETWEEN THE GRADIENT IN THE FIELD VERSUS THE DESIGN GRADIENT. COORDINATE ALL WORK WITH PAVING CONTRACTOR.
 - CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
 - SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
 - CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.
- A GEOTECHNICAL ENGINEERING SOILS REPORT HAS BEEN COMPLETED BY:
- COMPANY: _____
ADDRESS: _____
PHONE: _____
DATED: _____
- CONTRACTOR OBTAIN A COPY OF THE SOILS REPORT.
- CONTRACTOR SHALL COMPLETE DEWATERING AS REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION.
 - PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL SHALL BE PERFORMED ON THE STREET AND PARKING AREA SUBGRADE. CONTRACTOR SHALL PROVIDE A LOADED TANDEN AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER.
 - REPLACE ALL SUBGRADE SOIL DISTURBED DURING THE CONSTRUCTION THAT HAVE BECOME UNSUITABLE AND WILL NOT PASS A TEST ROLL. REMOVE UNSUITABLE SOIL FROM THE SITE AND IMPORT SUITABLE SOIL AT NO ADDITIONAL COST TO THE OWNER.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.
 - EXISTING TREES AND OTHER NATURAL VEGETATION WITHIN THE PROJECT AND/OR ADJACENT TO THE PROJECT ARE OF PRIME CONCERN TO THE CONTRACTOR'S OPERATIONS AND SHALL BE A RESTRICTED AREA. CONTRACTOR SHALL PROTECT TREES TO REMAIN AT ALL TIMES. EQUIPMENT SHALL NOT NECESSARILY BE OPERATED UNDER NEARBY TREES AND EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING ADJACENT TO TREES. SHOULD ANY PORTION OF THE TREE BRANCHES REQUIRE REMOVAL TO PERMIT OPERATION OF THE CONTRACTOR'S EQUIPMENT, CONTRACTOR SHALL OBTAIN THE SERVICES OF A PROFESSIONAL TREE TRIMMING SERVICE TO TRIM THE TREES PRIOR TO THE BEGINNING OF OPERATION. SHOULD CONTRACTOR'S OPERATIONS RESULT IN THE BREAKING OF ANY LIMBS, THE BROKEN LIMBS SHOULD BE REMOVED IMMEDIATELY AND CUTS SHALL BE PROPERLY PROTECTED TO MINIMIZE ANY LASTING DAMAGE TO THE TREE. NO TREES SHALL BE REMOVED WITHOUT AUTHORIZATION BY THE ENGINEER. COSTS FOR TRIMMING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE GRADING CONSTRUCTION AND NO SPECIAL PAYMENT WILL BE MADE.
 - 11.a. RESTRICTED AREAS SHALL INCLUDE ALL DESIGNATED TREE AREAS OUTSIDE OF THE DESIGNATED CONSTRUCTION ZONE. ALL VEGETATION WITHIN THE RESTRICTED AREAS SHALL REMAIN.
 - 11.b. CONTRACTOR SHALL RESTRICT ALL GRADING AND CONSTRUCTION ACTIVITIES TO AREAS DESIGNATED ON THE PLANS. ACTIVITIES WITHIN THE CONSTRUCTION MAY BE RESTRICTED TO A NARROWER WIDTH IN THE FIELD TO SAVE ADDITIONAL TREES AS DIRECTED BY THE OWNER.
 - 11.c. ACTIVITIES PROHIBITED OUTSIDE OF THE CONSTRUCTION BOUNDARIES WOULD INCLUDE, BUT NOT BE LIMITED TO: SOIL AND OTHER MATERIAL STOCKPILING, EQUIPMENT OR MACHINERY STORAGE, DRIVING OF ANY VEHICLE, LEAKAGE OR SPILLAGE OF ANY "WASHOUT" OR OTHER TOXIC MATERIAL. THE COLLECTION OF OTHER DEBRIS AND SOIL STOCKPILING WILL BE IN AN AREA DETERMINED ON-SITE BY THE ENGINEER.
 - 11.d. ALL RESTRICTED AREAS SHALL BE FENCED OFF WITH BRIGHT ORANGE POLYETHYLENE SAFETY NETTING AND STEEL STAKES AS SHOWN ON THE TREE PROTECTION DETAIL. AT NO TIME SHALL THIS FENCING BE REMOVED OR ACTIVITY OF ANY KIND TAKE PLACE WITHIN IT. FINAL PLACEMENT OF ALL PROTECTIVE FENCING SHALL BE COMPLETE BEFORE ANY WORK COMMENCES ON-SITE.
 - 11.e. BEFORE COMMENCING WITH ANY EXCAVATION CONTRACTOR SHALL COMPLETE ALL PREPARATORY WORK REGARDING TREE REMOVAL, ROOT PRUNING, TREE PRUNING AND STUMP REMOVAL TO THE SATISFACTION OF THE OWNER.
 - 11.f. PREPARATORY WORK SHALL INCLUDE THE FOLLOWING AND SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF THE OWNER'S REPRESENTATIVE:
 - 11.f.a. TREE REMOVAL: CONTRACTOR SHALL FELL THE TREES. AT NO TIME SHALL TREES BE BULLDOZED OUT, BUT SHALL BE CUT DOWN AND STUMPS REMOVED SEPARATELY. PRIOR TO THE FELLING OF ALL TREES, PROPER REMOVAL OF A PORTION OR ALL OF THE CANOPY SHALL BE COMPLETED SO THAT TREES IN THE RESTRICTED AREAS SHALL NOT BE INJURED IN THE PROCESS.

INFILTRATION BASIN CONSTRUCTION NOTES

- INFILTRATION BASIN CONSTRUCTION REQUIREMENTS: (INCLUDES ALL DEVICES USING FILTRATION THROUGH A SOIL MEDIUM TO CAPTURE STORM WATER RUNOFF BUT ARE NOT LIMITED TO: INFILTRATION BASINS, INFILTRATION TRENCHES, BIOPHILTRATION BASINS, RAINWATER GARDENS, SAND FILTERS, ORGANIC FILTERS, BIORETENTION AREAS, ENHANCED SWALES, DRY STORAGE PONDS WITH UNDERDRAIN DISCHARGE, AND NATURAL DEPRESSIONS; IF USED TO PROVIDE STORMWATER TREATMENT OF NEW IMPEROUS SURFACE)
 - 1.a. PERMITTEES MUST NOT EXCAVATE INFILTRATION SYSTEMS TO FINAL GRADE, OR WITHIN THREE (3) FEET OF FINAL GRADE, UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED UNLESS THEY PROVIDE PROPER EROSION PREVENTION AND SEDIMENT CONTROL (E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA. WHEN EXCAVATING AN INFILTRATION SYSTEM TO WITHIN THREE (3) FEET OF FINAL GRADE, PERMITTEES MUST STAKE OFF AND MARK THE AREA SO HEAVY CONSTRUCTION VEHICLES OR EQUIPMENT DO NOT COMPACT THE SOIL IN THE INFILTRATION AREA. ONCE STREET AND UTILITY CONSTRUCTION CEASES AND "FINAL STABILIZATION" (AS DEFINED ACCORDING TO SECTIONS 8 OF THE SWPPP NARRATIVE) OF CONTRIBUTING DRAINAGE AREA HAS BEEN COMPLETED, AND ONLY AFTER THE OWNER'S ENGINEER AUTHORIZES CONTRACTOR TO PROCEED, INFILTRATION BASIN SHALL BE EXCAVATED TO FINISHED GRADE.
 - 1.b. HEAVY EQUIPMENT SHALL NOT TRAVEL WITHIN THE INFILTRATION BASIN AREA. EXCAVATION WITHIN THE INFILTRATION BASIN SHALL BE PERFORMED BY USE OF A BACKHOE BUCKET WITH TEETH. CONTRACTOR SHALL DISC OR TILL THE SOILS IF REQUIRED BY THE SOILS ENGINEER.
 - 1.c. INFILTRATION BASIN SHALL BE PROTECTED BY SILT FENCE DURING ALL CONSTRUCTION ACTIVITIES. ALL DEPOSITED SEDIMENT DURING CONSTRUCTION ACTIVITY SHALL BE PROPERLY DISPOSED OF DOWNSTREAM OF INFILTRATION BASIN, IF POSSIBLE.
 - 1.d. ALL FLARED END SECTION INLETS AND CATCH BASIN MANHOLE INLETS SHALL HAVE INLET EROSION CONTROL PROTECTION IN PLACE UNTIL FINAL STABILIZATION BASIN HAS OCCURRED.
 - 1.e. ABOVE THE INFILTRATION BASIN OUTLET ELEVATION, INCLUDING THE BERM AND DISTURBED AREAS, A MINIMUM OF 4" DEPTH OF TOPSOIL MATERIAL SHALL BE PLACED TO THE FINISHED GRADE ELEVATION. TOPSOIL SHALL MEET (MN/DOT) SPECIFICATION. THE AREA SHALL BE SEED WITH MN STATE SEED MIXTURE 25-131 (LOW MAINTENANCE TURF) APPLIED AT A RATE OF 220 LBS/ACRE, OR MN STATE SEED MIXTURE 35-241 (MESC PRAIRIE GENERAL) APPLIED AT A RATE OF 36.5 LBS/ACRE. SOD MEETING (MN/DOT) SPECIFICATION 3878.2-B CAN BE SUBSTITUTED FOR SEED.
 - SEED APPLICATION PROCEDURE: MIXTURE APPLICATION PROCEDURES SHALL FOLLOW (MN/DOT) SPECIFICATION 2575.3. SEED SHALL BE SECURED BY USE OF (MN/DOT) SPECIFICATION 3885 CATEGORY 1 EROSION BLANKET.

ABSENT A SOIL TEST, FERTILIZER MEETING ANALYSIS 22-5-10 (NPK) 80% W.L.N. SHALL BE APPLIED AT A RATE OF 350 LBS/ACRE FOR SEED MIXTURE 25-131 OR FERTILIZER WITH AN ANALYSIS OF 18-1-8 (NPK) (FOR LOAMS, CLAY LOAM SOIL), OR 17-10-7 (NPK) (FOR SANDS WITH LESS THAN 30% ORGANIC AND CLAY MATTER) NATURAL BASE SHALL BE APPLIED AT A RATE OF 150 LBS/ACRE FOR SEED MIXTURE 35-241.
 - BELOW THE INFILTRATION BASIN OUTLET, INCLUDING BASIN FLOOR, PLACE PLANTING MEDIUM SOIL BASED ON-SITE SOIL CONDITIONS, AND ALSO BASED ON LANDSCAPE ARCHITECT WATERSHED, AND/OR CITY RECOMMENDATIONS (SEE DETAIL ON PLAN). DISTURBED AREAS TO BE SEED WITH MN STATE SEED MIXTURE 33-261 (STORMWATER SOUTH AND WEST) APPLIED AT A RATE OF 35 LBS/ACRE. DRAIN TILE INSTALLATION (IF REQUIRED) SHALL BE INSTALLED CONCURRENTLY WITH FLOOR CONSTRUCTION.
- NOTE: INFILTRATION BASIN FLOOR EXCAVATING, PLANTING MEDIUM SOIL PLACEMENT, DRAIN TILE INSTALLATION, ETC. SHALL TAKE PLACE ONLY AFTER THE OWNER'S ENGINEER AUTHORIZES CONTRACTOR TO PROCEED AND AFTER INFILTRATION BASIN SLOPES (ABOVE OUTLET ELEVATION) HAVE UNDERGONE "FINAL STABILIZATION" WHICH INCLUDES FLUSHING OUT ACCUMULATED SILT AND SEDIMENT FROM CONTRIBUTING STORM SEWER. EXCAVATED BASIN MATERIAL SHALL BE DISPOSED OF DOWNSTREAM OF BASIN AREA, IF POSSIBLE, OR OFF-SITE.

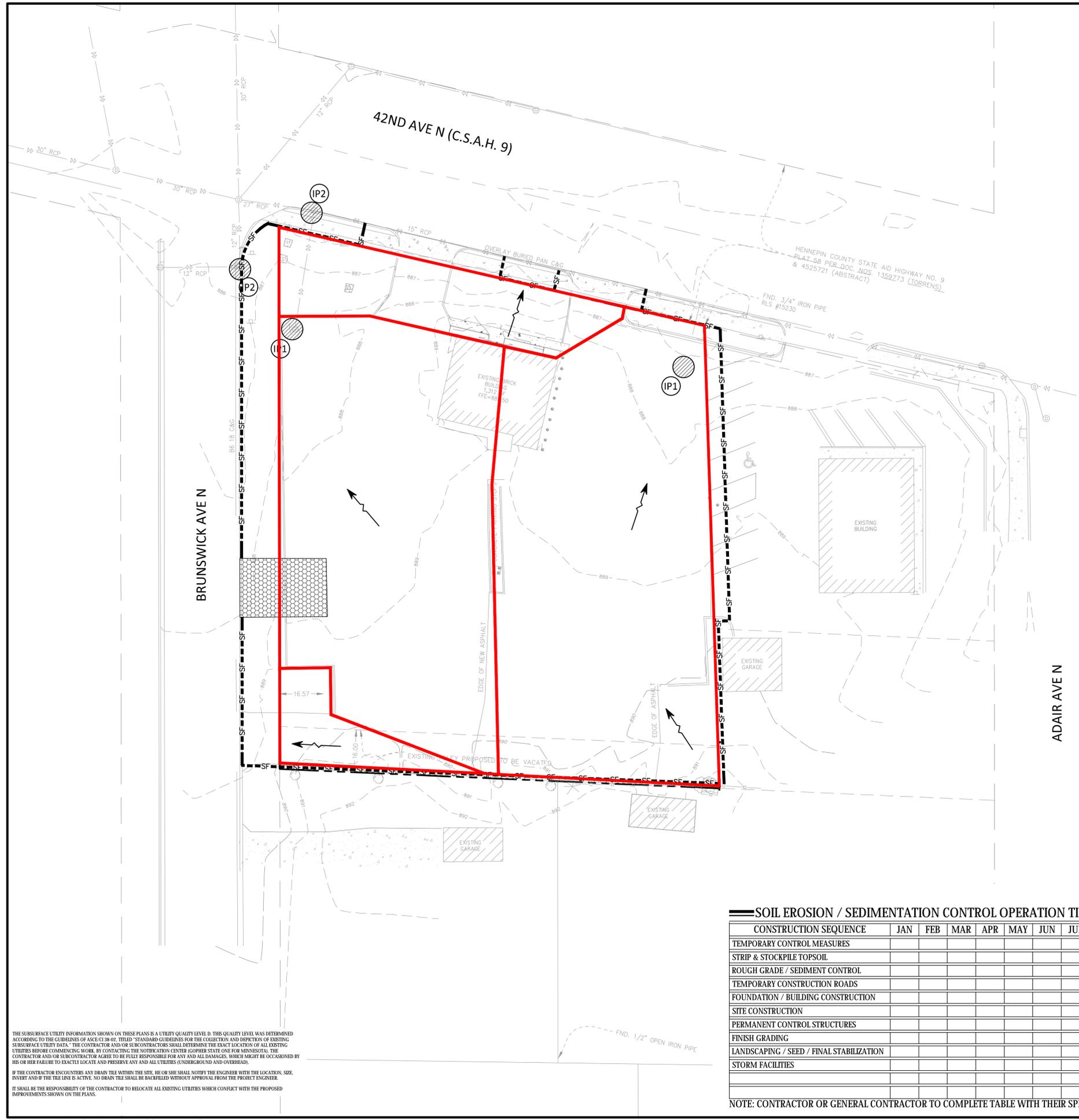
- SEED APPLICATION PROCEDURE: MIXTURE APPLICATION PROCEDURES SHALL FOLLOW (MN/DOT) SPECIFICATION 2575.3. SEED SHALL BE SECURED BY USE OF HYDRO MULCH, OR SECURED BY (MN/DOT) SPECIFICATION 3885 CATEGORY 1 OR CATEGORY 3 EROSION BLANKET. ABSENT A SOIL TEST, FERTILIZER WITH AN ANALYSIS OF 18-1-8 (NPK) (FOR LOAMS, CLAY LOAM SOIL), OR 17-10-7 (NPK) (FOR SANDS WITH LESS THAN 30% ORGANIC AND CLAY MATTER), NATURAL BASE SHALL BE APPLIED AT A RATE OF 120 LBS/ACRE.
- 1.g. CONTRACTOR SHALL RESEED OR REPLANT ANY AREAS ON WHICH THE ORIGINAL SEED HAS FAILED TO GERMINATE AS DIRECTED BY THE OWNER'S ENGINEER.
 - 1.h. IF ALTERNATIVE METHODS OF INFILTRATION BASIN CONSTRUCTION ARE PROPOSED BY THE CONTRACTOR, THOSE ALTERNATIVE METHODS WILL REQUIRE WRITTEN APPROVAL BY THE OWNER'S ENGINEER.
 - 1.i. COSTS FOR REMEDIATION (IF REQUIRED) TO COMPLETE INFILTRATION BASIN CONSTRUCTION WILL BE CONDUCTED AT THE CONTRACTOR'S EXPENSE.
- PERFORMANCE TESTING OF INFILTRATION BASINS: (TO BE CONDUCTED IF DESIGN INFILTRATION RATE WAS VERIFIED ACCORDING TO ASTM D-3385-03 "STANDARD TEST METHOD FOR INFILTRATION RATE OF SOILS IN FIELD USING DOUBLE-RING INFILTRMETER.")

ALL COSTS RELATED TO THE PERFORMANCE INFILTRATION TESTING SHALL BE PAID BY THE OWNER, EXCEPT AS NOTED. THE INFILTRATION BASINS WILL BE TESTED IN ACCORDANCE TO THE FOLLOWING PROCEDURE:

 - 2.a. A MINIMUM OF TWO INFILTRATION TESTS SHALL BE COMPLETED FOR EACH INFILTRATION BASIN (0.5 ACRE FLOOR AREA OR LESS). THE REQUIRED NUMBER OF TESTS SHALL BE VERIFIED WITH THE SOILS ENGINEER AND THE GOVERNING AUTHORITIES.
 - 2.b. TWO ADDITIONAL TESTS WILL BE REQUIRED FOR EACH 0.5 ACRE OF INFILTRATION BASIN FLOOR AREA.
 - 2.c. TEST PROCEDURE WILL FOLLOW ASTM D-3385-09 "STANDARD TEST METHOD FOR INFILTRATION RATE OF SOILS IN FIELD USING DOUBLE-RING INFILTRMETER".
 - 2.d. TEST WILL BE CONDUCTED AT THE FINISHED BASIN FLOOR ELEVATION.
 - 2.e. TEST WILL BE FOR A PERIOD AS OUTLINED IN ASTM D-3385-09.
 - 2.f. THE TEST RESULTS WILL BE AVERAGED TO OBTAIN THE INFILTRATION RATE USED FOR ACCEPTANCE.
 - 2.g. THE LOWEST MEASURED INFILTRATION RATE SHALL EXCEED THE DESIGN INFILTRATION RATE OF _____ INCHES/HOUR.
 - 2.h. THE AVERAGE OF THE MEASURED INFILTRATION RATES MUST MEET OR EXCEED THE DESIGN RATE OF _____ INCHES/HOUR DIVIDED BY THE CORRECTION FACTOR USED IN CALCULATING THE DESIGN RATE AS NOTED IN TABLE 12.1F.8 FROM THE LATEST EDITION OF THE MINNESOTA STORMWATER MANUAL.

IF THE INFILTRATION RATE AS TESTED DOES NOT MEET OR EXCEED THE REQUIRED RATE AS DETERMINED ABOVE, CONTRACTOR WILL BE REQUIRED TO COMPLETE SOIL CORRECTIVE AND/OR SOIL REPLACEMENT WORK AS NECESSARY WITHIN THE INFILTRATION BASIN AREA AT THE CONTRACTOR'S EXPENSE UNTIL THE INFILTRATION RATE AS TESTED EXCEEDS THE REQUIRED RATE AS DETERMINED ABOVE. SUBSEQUENT RE-TESTING WILL BE REQUIRED UNTIL THE INFILTRATION AS TESTED EXCEEDS THE REQUIRED RATE AS DETERMINED ABOVE. RE-TESTING SHALL BE AT THE CONTRACTOR'S EXPENSE AND WILL BE DEDUCTED FROM THE AMOUNT DUE THE CONTRACTOR.

- 11.f.b. ROOT PRUNING: BEFORE ANY STUMPS ARE TO BE REMOVED, ALL ROOTS SHALL BE SEVERED FROM ROOTS IN THE RESTRICTED AREAS BY SAW CUTTING WITH A VERMEER DESIGNED FOR ROOT PRUNING, BY HAND, OR WITH A CHAINSAW. TREE ROOTS PROJECTING INTO THE CONSTRUCTION ZONE SHALL BE EXPOSED PRIOR TO ROOT PRUNING WITH SMALL MACHINERY, I.E., BOBCAT.
 - 11.f.c. STUMP REMOVAL: AT SUCH TIME THAT ROOTS HAVE BEEN PROPERLY SEVERED, STUMPS MAY BE REMOVED. WHERE REMOVAL OF CERTAIN STUMPS COULD CAUSE DAMAGE TO EXISTING PROTECTED TREES, TREE STUMPS SHALL BE GROUND OUT. ALL STUMP REMOVAL SHALL BE UNDER THE DIRECT SUPERVISION OF THE OWNER'S REPRESENTATIVE.
 - 11.f.d. TREE PRUNING: PROPER PRUNING OF TREES IN THE RESTRICTED ZONE SHALL BE DIRECTED BY AND SUPERVISION AT ALL TIMES BY THE OWNER'S REPRESENTATIVE.
 - 11.g. AN OWNER'S REPRESENTATIVE WILL BE AVAILABLE AT ALL TIMES DURING THE PREPARATORY AND CONSTRUCTION PERIOD.
 - 11.h. MULCH RATHER THAN SEED OR SOD WILL BE USED AT THE BASE OF QUALITY TREES TO A PERIMETER DETERMINED BY THE OWNER'S REPRESENTATIVE. AREAS TO BE SEED FOR EROSION CONTROL PURPOSES WITHIN THE CONSTRUCTION ZONE ARE TO BE DETERMINED BY THE OWNER'S REPRESENTATIVE. NATURAL GROUND COVER WILL BE MAINTAINED WHEREVER POSSIBLE.
 - 11.i. THE USE OF RETAINING WALLS NEAR TREES, IN ADDITION TO THOSE REQUIRED ON THE PLANS SHALL BE DETERMINED IN THE FIELD, BASED ON TREE LOCATIONS AND TOPOGRAPHY.
- EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF BUILDING PADS, ROADWAYS AND PARKING AREAS. CONTRACTOR SHALL SUBCUT CUT AREAS, WHERE TURF IS TO BE ESTABLISHED, TO A DEPTH OF 6 INCHES. RESPREAD TOPSOIL IN AREAS WHERE TURF IS TO BE ESTABLISHED TO A MINIMUM DEPTH OF 6 INCHES.
 - TRENCH BORROW CONSTRUCTION: IF ALLOWED BY THE OWNER, CONTRACTOR SHALL COMPLETE "TRENCH BORROW" EXCAVATION IN AREAS DIRECTED BY THE ENGINEER IN ORDER TO OBTAIN STRUCTURAL MATERIAL. TREES SHALL NOT BE REMOVED OR DAMAGED AS A RESULT OF THE EXCAVATION UNLESS APPROVED BY THE ENGINEER. THE EXCAVATION SHALL COMMENCE A MINIMUM OF 10 FEET FROM THE LIMIT OF THE BUILDING PAD. THE EXCAVATION FROM THIS LIMIT SHALL EXTEND AT A MINIMUM SLOPE OF 1 FOOT HORIZONTAL TO 1 FOOT VERTICAL (1:1) DOWNWARD AND OUTWARD FROM THE FINISHED SURFACE GRADE ELEVATION. THE TRENCH BORROW EXCAVATION SHALL BE BACKFILLED TO THE PROPOSED FINISHED GRADE ELEVATION, AND SHALL BE COMPACTED IN ACCORDANCE WITH REQUIREMENTS OF THE QUALITY COMPACTION METHOD AS OUTLINED IN MN/DOT SPECIFICATION 2105.3F2. SNOW FENCE SHALL BE FURNISHED AND PLACED ALONG THE PERIMETER OF THE TRENCH BORROW AREA WHERE THE SLOPES EXCEED 2 FOOT HORIZONTAL TO 1 FOOT VERTICAL (2:1).
 - FINISHED GRADING SHALL BE COMPLETED. CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISHED GRADDED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED, ERODED OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK.
- TOLERANCES
 - 15.a. THE RESIDENTIAL BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.30 FOOT ABOVE, OR 0.30 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.
 - 15.b. THE COMMERCIAL BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.10 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.
 - 15.c. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF ANY POINT WHERE MEASUREMENT IS MADE.
 - 15.d. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
 - 15.e. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
 - AFTER THE SITE GRADING IS COMPLETED, IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
 - CONTRACTOR SHALL DETERMINE THE LOCATION OF ANY HAUL ROADS THAT MAY BE REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION AND SHALL INDICATE HAUL ROADS ON EROSION AND SEDIMENT CONTROL "SITE MAP". CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITY OF EACH ROADWAY. CONTRACTOR SHALL POST WHATEVER SECURITY, AND COMPLY WITH ALL CONDITIONS WHICH ARE REQUIRED BY EACH GOVERNING AUTHORITY OF EACH ROADWAY.
 - DISTURBED AREAS WITHIN WETLAND MITIGATION SITE AND ANY DISTURBED AREAS WITHIN THE WETLAND SHALL BE RESTORED WITH 6 TO 12 INCHES OF ORGANIC SOILS, PREFERABLY SOILS THAT WERE PREVIOUSLY REMOVED FROM WETLAND AREAS. SEEDING IN THE WETLAND MITIGATION AREAS ABOVE THE NORMAL WATER LEVEL SHALL BE MN STATE SEED MIX 34-271, WET MEADOW SOUTH AND WEST, OR APPROVED EQUAL. FOR STATE SEED MIXES, OATS AND WINTER WHEAT SHOULD BE SELECTED BASED ON THE TIME OF YEAR THAT THE MIX IS BEING USED. OATS SHOULD BE INCLUDED IN MIXES IF BEING USED BETWEEN OCTOBER 15TH AND AUGUST 1ST. WINTER WHEAT SHOULD BE USED BETWEEN AUGUST 1ST AND OCTOBER 15TH. THE SEEDING RATE IS THE SAME FOR OATS AND WINTER WHEAT. MIX 34-271 SHOULD BE APPLIED AT 12 POUNDS PER ACRE. SEED SHALL BE WATERED UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
 - FILL PLACED WITHIN THE BUILDING PAD AREAS SHALL BE IN CONFORMANCE WITH HUD/FHA PROCEDURES AND DATA SHEET 79G.
 - RETAINING WALL(S) SHALL BE CONSTRUCTED OF _____ (MODULAR BLOCK, TREATED TIMBER, BOULDER, ETC.) MATERIAL. CONTRACTOR SHALL SUBMIT TO THE ENGINEER AND LOCAL AUTHORITY CERTIFIED ENGINEERING DRAWINGS, DESIGN CALCULATIONS AND SOIL BORING(S). THE CERTIFIED ENGINEER SHALL PROVIDE CONSTRUCTION OBSERVATIONS OF THE RETAINING WALL IMPROVEMENT, AND A LETTER CERTIFYING THE INSTALLATION OF THE WALL(S) WAS CONSTRUCTED IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.



LEGEND

	PROPOSED	EXISTING
CURB & GUTTER		
STORM SEWER		
DRAIN TILE		
CONTOUR		
RIP RAP		
OVERFLOW ELEV.		
SILT FENCE		
SILT DIKE		
LIMITS OF DISTURBANCE		
SOIL BORINGS		
DIRECTION OF OVERLAND FLOW		
TEMPORARY DIVERSION DITCH		
CHECK DAM		
LIMITS OF DRAINAGE SUB-BASIN		
BIO-ROLL		
INLET PROTECTION DEVICE		
TEMPORARY STONE CONSTRUCTION ENTRANCE		
TEMPORARY SEDIMENT BASIN		
TEMPORARY STORAGE AND PARKING AREA		
TEMPORARY STABILIZATION MEASURES (SEED, MULCH, MATS OR BLANKETS AS OUTLINED IN THE SWPPP)		

NOTE TO CONTRACTOR

THE EROSION CONTROL PLAN SHEETS ALONG WITH THE REST OF THE SWPPP MUST BE KEPT ONSITE UNTIL THE NOTICE OF TERMINATION IS FILED WITH THE MPCA. THE CONTRACTOR MUST UPDATE THE SWPPP, INCLUDING THE EROSION CONTROL PLAN SHEETS AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMPs DESIGNED TO CORRECT PROBLEMS IDENTIFIED. AFTER FILING THE NOTICE OF TERMINATION, THE SWPPP, INCLUDING THE EROSION CONTROL PLAN SHEETS, AND ALL REVISIONS TO IT MUST BE SUBMITTED TO THE OWNER, TO BE KEPT ON FILE IN ACCORDANCE WITH THE RECORD RETENTION REQUIREMENTS DESCRIBED IN THE SWPPP NARRATIVE.

EROSION CONTROL MATERIALS QUANTITIES

ITEM	UNIT	QUANTITY
SILT FENCE	LINEAR FEET	500
BIO-ROLL	LINEAR FEET	100
CONSTRUCTION ENTRANCE	UNIT	1
INLET PROTECTION DEVICE (IP-1)	UNIT	2
INLET PROTECTION DEVICE (IP-2)	UNIT	2

* REFER TO SHEET C5.03 FOR GENERAL NOTES, MAINTENANCE NOTES, LOCATION MAPS, AND STANDARD DETAILS

SOIL EROSION / SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

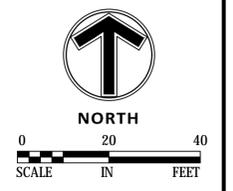
CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
TEMPORARY CONTROL MEASURES																			
STRIP & STOCKPILE TOPSOIL																			
ROUGH GRADE / SEDIMENT CONTROL																			
TEMPORARY CONSTRUCTION ROADS																			
FOUNDATION / BUILDING CONSTRUCTION																			
SITE CONSTRUCTION																			
PERMANENT CONTROL STRUCTURES																			
FINISH GRADING																			
LANDSCAPING / SEED / FINAL STABILIZATION																			
STORM FACILITIES																			

NOTE: CONTRACTOR OR GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/C1 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. BY CONTACTING THE NOTIFICATION CENTER GOVERNOR STATE ONE FOR MINNESOTA, THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRABN THE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND IF THE LINE IS ACTIVE. NO DRABN THE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Minnesota.

Joshua E. Baker
Registration No. 1979 Date: MM/DD/2019
If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

Summary

Designed: MJJ Drawn: MJJ
Approved: JEB Book / Page:
Phase: PRELIMINARY Initial Issue: 12/17/2019

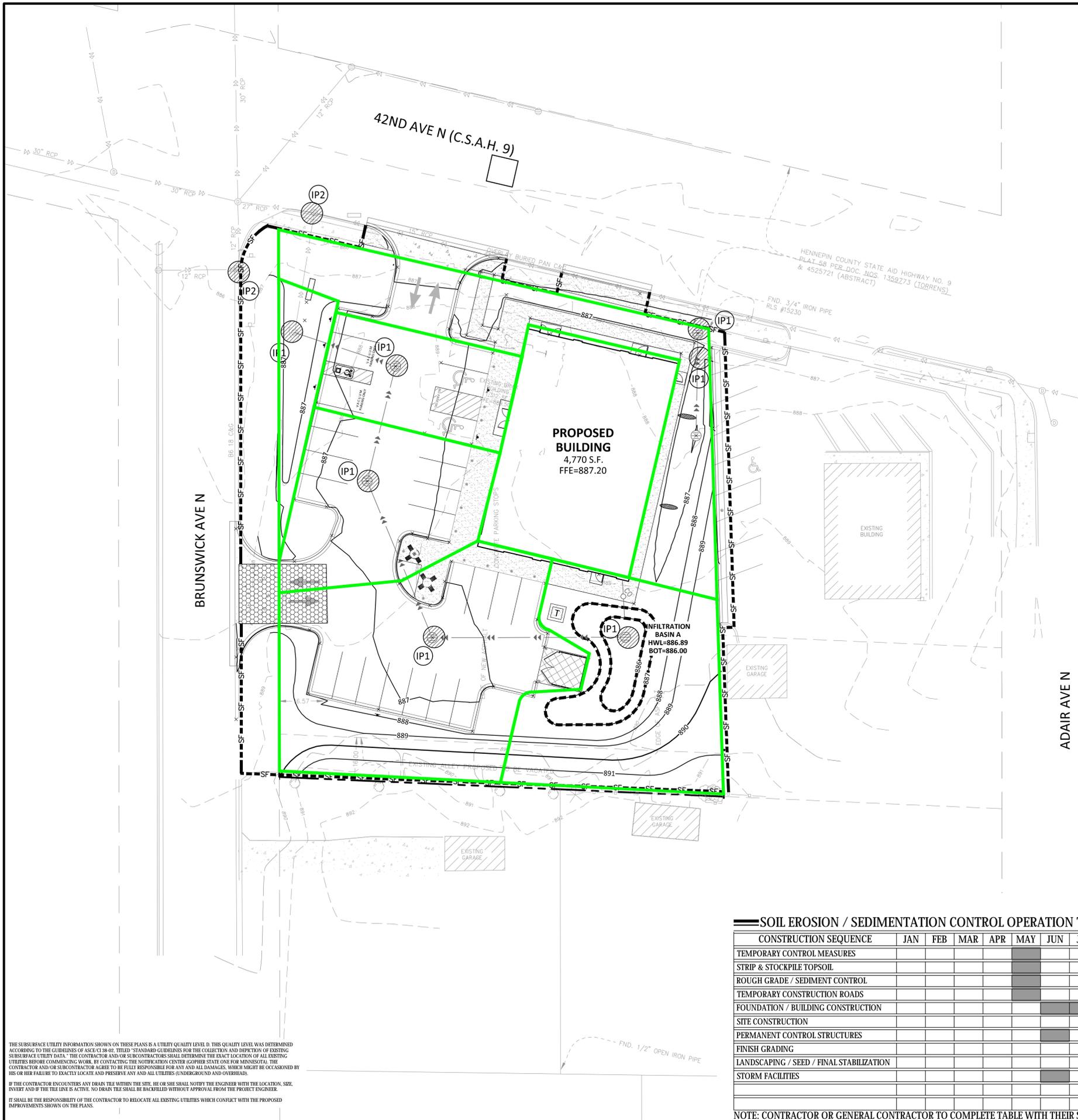
Revision History

No.	Date By	Submittal / Revision
1	01/02/20 AJR	CITY COMMENTS

Sheet Title
PHASE II
EROSION
CONTROL PLAN

Sheet No. Revision
C5.02

Project No. 21978



LEGEND

	PROPOSED	EXISTING
CURB & GUTTER		
STORM SEWER		
DRAIN TILE		
CONTOUR		
RIP RAP		
OVERFLOW ELEV.		
SILT FENCE		
SILT DIKE		
LIMITS OF DISTURBANCE		
SOIL BORINGS		
DIRECTION OF OVERLAND FLOW		
TEMPORARY DIVERSION DITCH		
CHECK DAM		
LIMITS OF DRAINAGE SUB-BASIN		
BIO-ROLL		
INLET PROTECTION DEVICE		
TEMPORARY STONE CONSTRUCTION ENTRANCE		
TEMPORARY SEDIMENT BASIN		
TEMPORARY STORAGE AND PARKING AREA		
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EROSION CONTROL MATERIALS QUANTITIES

ITEM	UNIT	QUANTITY
SILT FENCE	LINEAR FEET	500
BIO-ROLL	LINEAR FEET	120
CONSTRUCTION ENTRANCE	UNIT	1
INLET PROTECTION DEVICE (IP-1)	UNIT	6
INLET PROTECTION DEVICE (IP-2)	UNIT	2

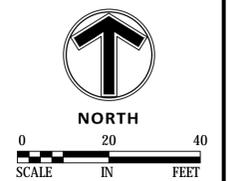
* REFER TO SHEET C5.03 FOR GENERAL NOTES, MAINTENANCE NOTES, LOCATION MAPS, AND STANDARD DETAILS

SOIL EROSION / SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
TEMPORARY CONTROL MEASURES																			
STRIP & STOCKPILE TOPSOIL																			
ROUGH GRADE / SEDIMENT CONTROL																			
TEMPORARY CONSTRUCTION ROADS																			
FOUNDATION / BUILDING CONSTRUCTION																			
SITE CONSTRUCTION																			
PERMANENT CONTROL STRUCTURES																			
FINISH GRADING																			
LANDSCAPING / SEED / FINAL STABILIZATION																			
STORM FACILITIES																			

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IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

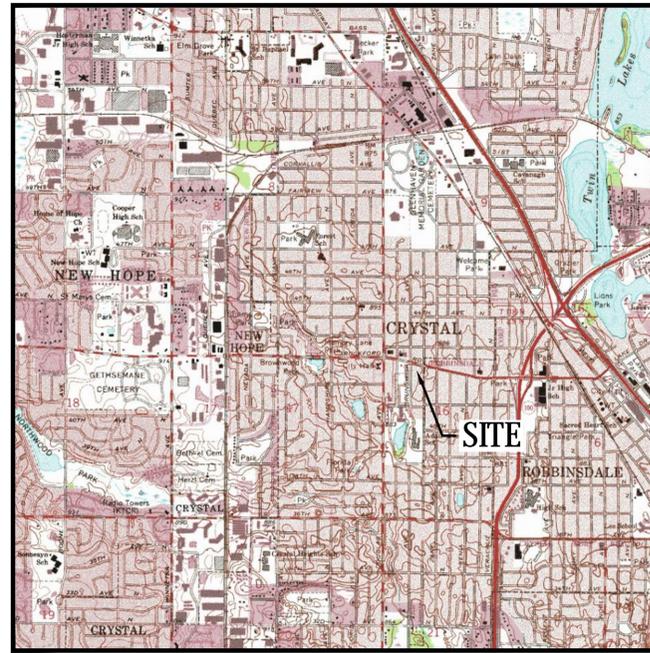


EROSION & SEDIMENTATION CONTROL NOTES & DETAILS / "SITE MAP"



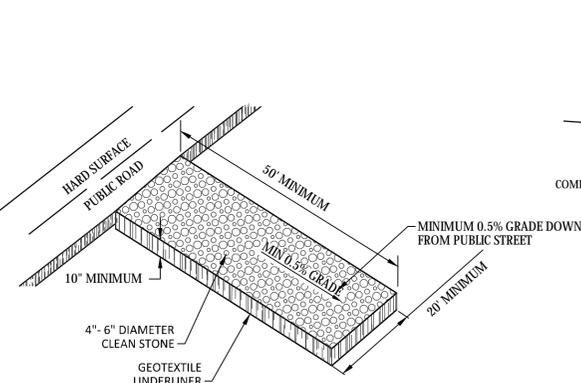
SITE LOCATION MAP

NOT TO SCALE



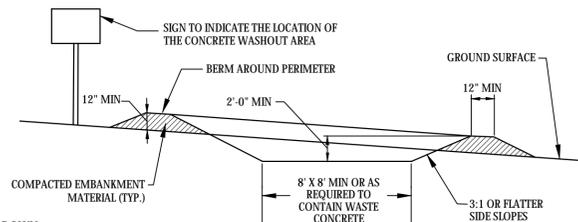
USGS MAP

NOT TO SCALE



TEMPORARY STONE CONSTRUCTION EXIT

N.T.S.

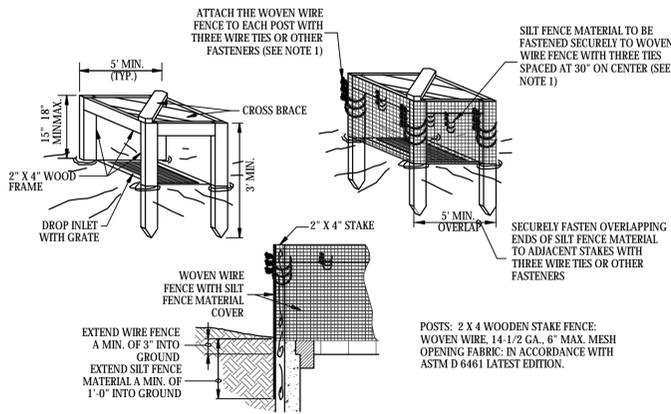


CONCRETE WASHOUT AREA

NOT TO SCALE

NOTES:

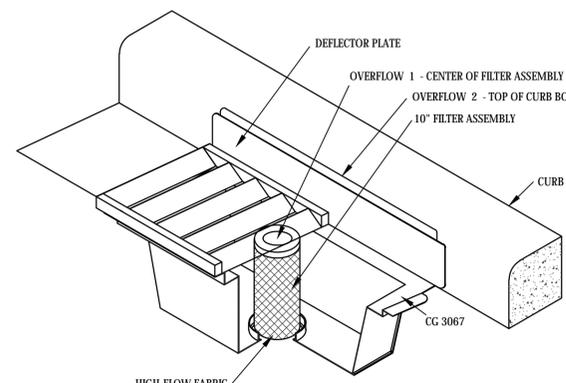
1. CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. CONCRETE WASHOUT AREA SHALL BE LINED WITH MINIMUM 10 MIL THICK PLASTIC LINER.
3. VEHICLE TRACKING CONTROL IS REQUIRED IF ACCESS TO CONCRETE WASHOUT AREA IS OFF PAVEMENT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
6. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN ACCEPTED WASTE SITE.
7. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.



1. ATTACH THE WOVEN WIRE FENCE TO EACH POST AND THE GEOTEXTILE TO THE WOVEN WIRE FENCE (SPACED EVERY 30" WITH THREE WIRE TIES OR OTHER FASTENERS. ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART.
2. WHEN TWO SECTIONS OF SILT FENCE MATERIAL ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED ACROSS TWO POSTS.
3. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED ONE-HALF THE HEIGHT OF THE FABRIC. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-HALF THE HEIGHT OF THE SILT FENCE MATERIAL ABOVE GRADE.
4. ALL SILT FENCE INLETS SHALL INCLUDE WIRE SUPPORT.

SILT FENCE INLET PROTECTION (IP-1)

NOT TO SCALE



ROAD DRAIN INLET PROTECTION (IP-2)

NOT TO SCALE

AREA SUMMARY IN ACRES

PAVEMENT AREA	0.31 AC±
BUILDING AREA	0.11 AC±
SEEDED AREA	0.29 AC±
TOTAL DISTURBED	0.70 AC±
PRE - CONSTRUCTION IMPERVIOUS	0.62 AC±
POST - CONSTRUCTION IMPERVIOUS	0.42 AC±

GENERAL EROSION NOTES:

1. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME. WHERE A CONFLICT EXISTS BETWEEN LOCAL JURISDICTIONAL STANDARD SPECIFICATIONS AND SAMBATEK STANDARD SPECIFICATIONS, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
2. THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THIS DRAWING (EROSION & SEDIMENTATION CONTROL PLAN-ESC PLAN), THE STANDARD DETAILS, THE PLAN NARRATIVE, AND ITS APPENDICES, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING & SUBMITTING THE APPLICATION FOR THE MPCA GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE SWPPP AND THE STATE OF MINNESOTA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT, ISSUED AUGUST 1, 2018) AND BECOME FAMILIAR WITH THE CONTENTS. THE SWPPP AND ALL OTHER RELATED DOCUMENTS MUST BE KEPT AT THE SITE DURING CONSTRUCTION.
4. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE SWPPP & PERMITS. CONTRACTOR SHALL OVERSEE THE INSPECTION & MAINTENANCE OF THE BMP'S AND EROSION PREVENTION FROM BEGINNING OF CONSTRUCTION AND UNTIL CONSTRUCTION IS COMPLETED, IS APPROVED BY ALL AUTHORITIES, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA BY EITHER THE OWNER OR OPERATOR AS APPROVED ON PERMIT. ADDITIONAL BMP'S SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
5. CONTRACTOR SHALL COMPLY WITH TRAINING REQUIREMENTS IN PART 21.1-21.3 OF THE GENERAL PERMIT.
6. BMP'S AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
7. ESC PLAN MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
8. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE ESC PLANS SHALL BE CLEARLY DELINEATED (E.G. WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.) ON THE DEVELOPMENT SITE BEFORE WORK BEGINS. GROUND DISTURBING ACTIVITIES MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE.
9. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
10. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) MUST BE LIMITED TO A DEFINED AREA OF THE SITE AND SHALL BE CONTAINED AND PROPERLY TREATED OR DISPOSED. NO ENGINE DEGREASING IS ALLOWED ON SITE.
11. ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER IS NOT ACCEPTABLE. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. SELF-CONTAINED CONCRETE WASHOUTS ON CONCRETE DELIVERY TRUCKS ARE ALLOWED.
12. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
13. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
14. SOLID WASTE: COLLECTED SEDIMENT, ASPHALT & CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION & DEMOLITION DEBRIS & OTHER WASTES MUST BE DISPOSED OF PROPERLY & MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.
15. HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT & ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT, TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE & DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPCA REGULATIONS.
16. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE SWPPP, SHALL BE INITIATED AS SOON AS PRACTICABLE AND PRIOR TO SOIL DISTURBING ACTIVITIES UPSLOPE.
17. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED SHALL BE TEMPORARILY SEEDED, WITHIN 14 DAYS OF INACTIVITY. SEEDING SHALL BE IN ACCORDANCE WITH MN/DOT SEED MIXTURE NUMBER 21-111 OR 21-112 DEPENDING ON THE SEASON OF PLANTING (SEE MN/DOT SPECIFICATION SECTION 2575.3). SEEDING METHOD AND APPLICATION RATE SHALL CONFORM TO MN/DOT SPECIFICATION SECTION 2575.3. TEMPORARY MULCH SHALL BE APPLIED IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3F1 AND 2575.3G. ALTERNATIVELY, HYDRAULIC SOIL STABILIZER IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3H MAY BE USED IN PLACE OF TEMPORARY MULCH.
18. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE TIME TABLE DESCRIBED ABOVE. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN FOR VEGETATIVE COVER.
19. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM CONVEYANCES & FROM TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS. SEDIMENT MUST BE STABILIZED TO PREVENT IT FROM BEING WASHED BACK INTO THE BASIN, CONVEYANCES, OR DRAINAGEWAYS DISCHARGING OFF-SITE OR TO SURFACE WATERS. THE CLEANOUT OF PERMANENT BASINS MUST BE SUFFICIENT TO RETURN THE BASIN TO DESIGN CAPACITY.
20. ON SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BMP'S. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
21. TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS & CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB & GUTTER SYSTEMS OR CONDUITS & DITCHES.
22. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
23. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, CHECK DAMS, INLET PROTECTION DEVICES, ETC.) TO PREVENT EROSION.
24. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

MAINTENANCE NOTES:

- ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. THE DESIGNATED CONTACT PERSON NOTED ON THIS PLAN MUST ROUTINELY INSPECT THE CONSTRUCTION ON SITE ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
1. ALL SILT FENCES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE FENCE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
 2. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS (SEE PART 10.1-10.5 OF THE GENERAL PERMIT).
 3. SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY EROSION. CONTRACTOR MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. CONTRACTOR SHALL USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK.
 4. CONSTRUCTION SITE VEHICLE EXIT LOCATIONS MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL OFF-SITE PAVED SURFACES, WITHIN 24 HOURS OF DISCOVERY, OR IF APPLICABLE, WITHIN A SHORTER TIME TO COMPLY WITH PART 9.11-9.12 OF THE GENERAL PERMIT.
 5. CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMP'S, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMP'S. FOR THE DURATION OF THE CONSTRUCTION WORK AT THE SITE, THE PERMITTEE(S) ARE RESPONSIBLE UNTIL ANOTHER PERMITTEE HAS ASSUMED CONTROL (ACCORDING TO PART 3.1 TO 3.8 OF THE MPCA GENERAL PERMIT) OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED OR THE SITE HAS UNDERGONE FINAL STABILIZATION, AND A (N.O.T.) HAS BEEN SUBMITTED TO THE MPCA.
 6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS).
 7. ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITIES IS REACHING THE INFILTRATION AREA AND THESE AREAS ARE PROTECTED FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT DRIVING ACROSS THE INFILTRATION AREA.

SEQUENCE OF CONSTRUCTION

- PHASE I:**
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
 2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
 3. CONSTRUCT THE SILT FENCES ON THE SITE.
 4. INSTALL INLET PROTECTION DEVICES ON EXISTING STORM STRUCTURES, AS SHOWN ON THE PLAN.
 5. CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS, AS REQUIRED.
 6. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION OF BMP'S. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
 7. CLEAR AND GRUB THE SITE.
 8. BEGIN GRADING THE SITE.
 9. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
- PHASE II:**
1. TEMPORARILY SEED DENUDED AREAS.
 2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
 3. INSTALL RIP RAP AROUND OUTLET STRUCTURES.
 4. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
 5. PREPARE SITE FOR PAVING.
 6. PAVE SITE.
 7. INSTALL INLET PROTECTION DEVICES.
 8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
 9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED), IF REQUIRED BY THE CONTRACT.

Sambatek
www.sambatek.com
12800 Whitewater Drive, Suite 300
Minnetonka, MN 55343
763.476.6010 telephone

Engineering | Surveying | Planning | Environmental

Client
LINN INVESTMENT PROPERTIES, LLC

Project
TUMBLE FRESH

Location
CRYSTAL, MN

6023 42ND AVE N

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Minnesota.

Joshua E. Baker
Registration No. 1279 Date: MM/DD/2019
If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

Summary

Designed: MJJ Drawn: MJJ
Approved: JEB Book / Page:
Phase: PRELIMINARY Initial Issue: 12/17/2019

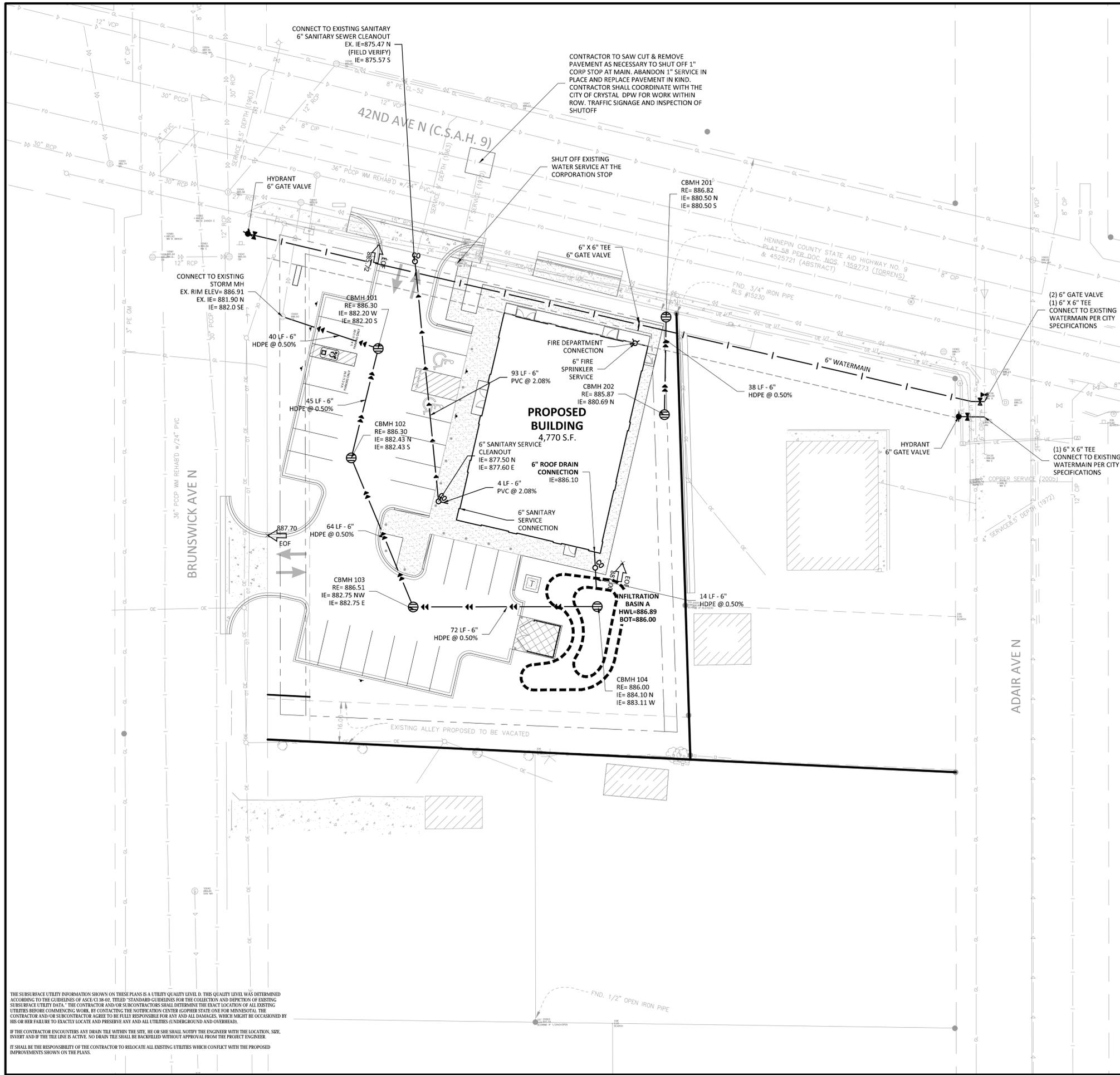
Revision History

No.	Date By	Submittal / Revision
1	01/02/20 AJR	CITY COMMENTS

Sheet Title
EROSION CONTROL NOTES & DETAILS

Sheet No. Revision
C5.03

Project No. 21978



LEGEND

	PROPOSED	EXISTING
CURB & GUTTER		
STORM SEWER		
SANITARY SEWER		
FORCEMAIN (SAN.)		
WATERMAIN		
EASEMENT		
DRAINTILE		
GAS LINE		
ELECTRIC		
TELEPHONE		

UTILITY CONSTRUCTION NOTES

- THE UTILITY IMPROVEMENTS FOR THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD UTILITIES SPECIFICATIONS" AS PUBLISHED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), EXCEPT AS MODIFIED HEREIN. CONTRACTOR SHALL OBTAIN A COPY OF THESE SPECIFICATIONS.
 - ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY REQUIREMENTS.
 - CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP WATERMAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCES OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE THE LIABILITY OF CONTRACTOR.
 - A MINIMUM VERTICAL SEPARATION OF 18 INCHES AND HORIZONTAL SEPARATION OF 10-FEET BETWEEN OUTSIDE PIPE DIAMETERS IS REQUIRED AT ALL WATERMAIN AND SEWER MAIN (BUILDING, STORM AND SANITARY) CROSSINGS.
 - ALL MATERIALS SHALL BE AS SPECIFIED IN CEAM SPECIFICATIONS EXCEPT AS MODIFIED HEREIN.
 - ALL MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY.
 - ALL SANITARY SEWER TO BE PVC SDR-35, UNLESS NOTED OTHERWISE.
 - ALL SANITARY SEWER SERVICES TO BUILDING SHALL BE PVC SCH 40 CONFORMING TO ASTM D2665.
 - ALL WATERMAIN TO BE DUCTILE IRON - CLASS 52, UNLESS NOTED OTHERWISE.
 - ALL WATERMAIN TO HAVE 7.5-FEET OF COVER OVER TOP OF WATERMAIN.
 - PROVIDE THRUST BLOCKING AND MECHANICAL JOINT RESTRAINTS ON ALL WATERMAIN JOINTS PER CITY STANDARDS.
 - ALL STORM SEWER PIPE TO BE SMOOTH INTERIOR DUAL WALL HDPE PIPE WITH WATER TIGHT GASKETS, UNLESS NOTED OTHERWISE.
 - ALL STORM SEWER PIPE FOR ROOF DRAIN SERVICES TO BUILDING SHALL BE PVC SCH 40 CONFORMING TO ASTM D2665.
 - RIP RAP SHALL BE Mn/DOT CLASS 3.
 - COORDINATE ALL BUILDING SERVICE CONNECTION LOCATIONS AND INVERT ELEVATIONS WITH MECHANICAL CONTRACTOR PRIOR TO CONSTRUCTION.
 - ALL BUILDING SERVICE CONNECTIONS (STORM, SANITARY, WATER) WITH FIVE FEET OR LESS COVER ARE TO BE INSULATED FROM BUILDING TO POINT WHERE 5-FEET OF COVER IS ACHIEVED.
 - CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
 - SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DESIGNER TO CONDUCT CONSTRUCTION REVIEW OF CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
 - ALL AREAS OUTSIDE THE PROPERTY BOUNDARIES THAT ARE DISTURBED BY UTILITY CONSTRUCTION SHALL BE RESTORED IN KIND. SODDED AREAS SHALL BE RESTORED WITH 6 INCHES OF TOPSOIL PLACED BENEATH THE SOD.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.
 - ALL SOILS TESTING SHALL BE COMPLETED BY AN INDEPENDENT SOILS ENGINEER. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SOILS SHALL BE COMPLETED AS REQUIRED BY THE SOILS ENGINEER. THE UTILITY BACKFILL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOILS TESTS AND SOIL INSPECTIONS WITH THE SOILS ENGINEER.
- A GEOTECHNICAL ENGINEERING REPORT HAS BEEN COMPLETED BY:
- COMPANY: TERRACON CONSULTANTS, INC.
 ADDRESS: 13406 15TH AVE N. PLYMOUTH, MN 55441-4532
 PHONE: 763-489-3100
 DATED: NOVEMBER 26, 2019
- CONTRACTOR SHALL OBTAIN A COPY OF THIS SOILS REPORT.
- CONTRACTOR SHALL SUBMIT 2 COPIES OF SHOP DRAWINGS FOR MANHOLE AND CATCH BASIN STRUCTURES TO SAMBATEK. CONTRACTOR SHALL ALLOW 5 WORKING DAYS FOR SHOP DRAWING REVIEW.
 - CONTRACTOR AND MATERIAL SUPPLIER SHALL DETERMINE THE MINIMUM DIAMETER REQUIRED FOR EACH STORM SEWER STRUCTURE.
 - (REMOVE IF THERE IS NO UNDERGROUND SYSTEM)
 THE UNDERGROUND STORMWATER SYSTEM SHOWN ON THE UTILITY PLAN AND THE DETAIL SHEETS IS FOR INFORMATIONAL PURPOSES ONLY AND DEPICTS THE MINIMUM STORAGE REQUIREMENTS AND THE SYSTEM ELEVATIONS. THE CONTRACTOR (WITH THEIR SUPPLIER OR DESIGNER) SHALL SUBMIT DESIGN DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. THE DESIGN DRAWINGS SHALL DEPICT THE FINAL LAYOUT AND DETAILS FOR CONSTRUCTION. THE DRAWINGS SHALL BE CERTIFIED BY A LICENSED ENGINEER FOR THE STATE IN WHICH THE PROJECT IS CONSTRUCTED. THE SUBMITTAL SHALL INCLUDE ALL NECESSARY PRODUCT INFORMATION, DESIGN CALCULATIONS AND BEDDING REQUIREMENTS FOR THE PROPOSED STORMWATER SYSTEM, FOLLOWING CONSTRUCTION. THE CERTIFYING ENGINEER SHALL SUBMIT A LETTER TO THE OWNER AND ENGINEER INDICATING THEY OBSERVED THE INSTALLATION AND THE INSTALLATION OF THE STORMWATER SYSTEM WAS IN CONFORMANCE WITH THE CERTIFIED DRAWINGS.

Client
LINN INVESTMENT PROPERTIES, LLC

Project
TUMBLE FRESH

Location
CRYSTAL, MN

6023 42ND AVE N

Certification

I hereby certify that this plan, specification or report was prepared by a professional engineer or land surveyor who is duly licensed and qualified in the State of Minnesota. My license number is 145166648E and I am a member of the Board of Professional Engineers and Land Surveyors of the State of Minnesota.

William H. Boller
 Registration No. 145166648E Date: MM/DD/2019
 I hereby certify that this plan, specification or report was prepared by a professional engineer or land surveyor who is duly licensed and qualified in the State of Minnesota. My license number is 145166648E and I am a member of the Board of Professional Engineers and Land Surveyors of the State of Minnesota.

Summary

Designed: MJJ Drawn: MJJ
 Approved: JEB Book / Page:
 Phase: PRELIMINARY Initial Issue: 12/17/2019

Revision History

No.	Date	By	Submittal / Revision
1	01/02/20	AJR	CITY COMMENTS

Sheet Title
UTILITY PLAN

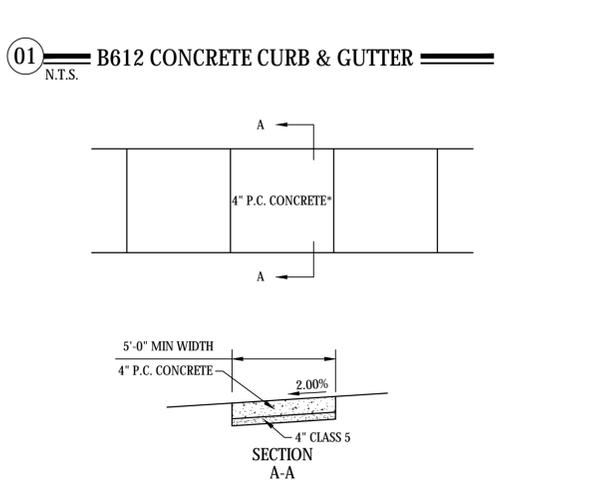
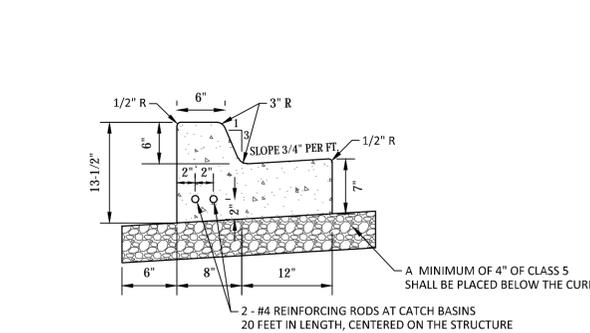
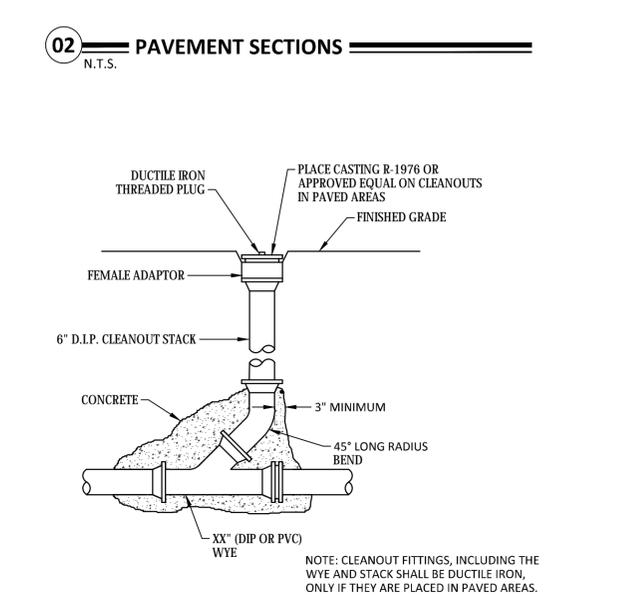
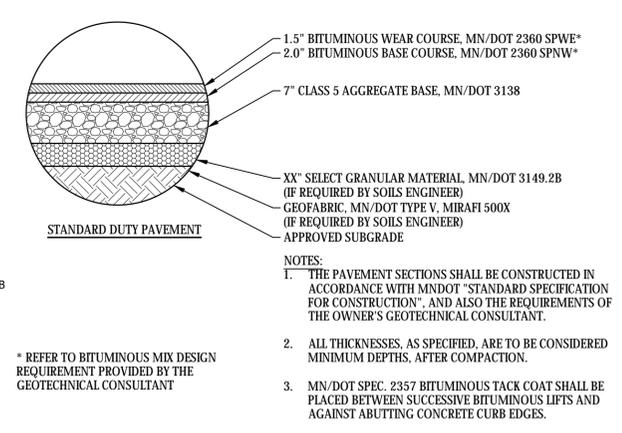
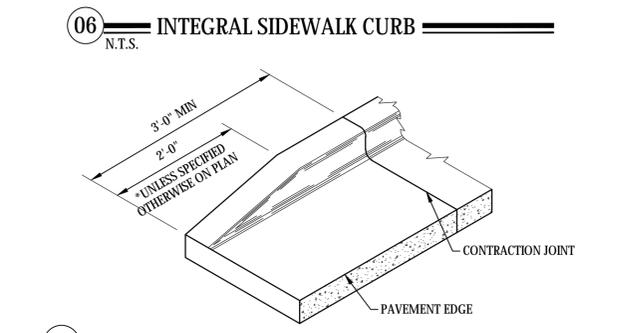
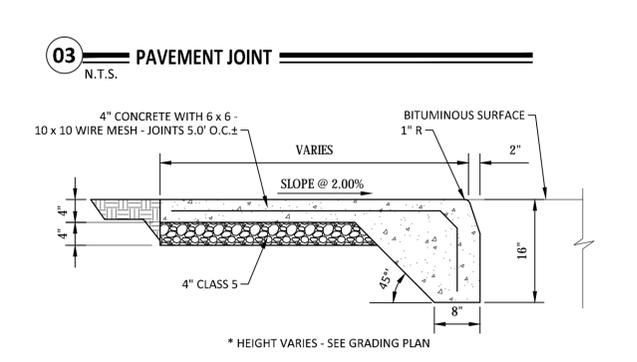
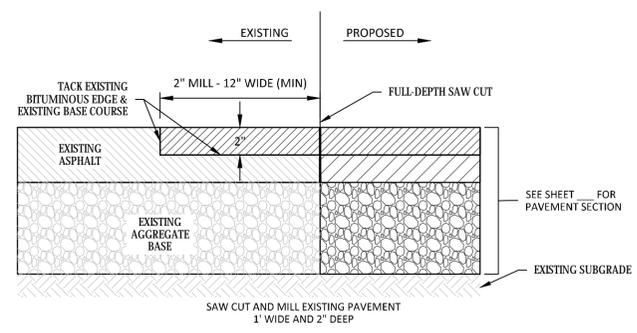
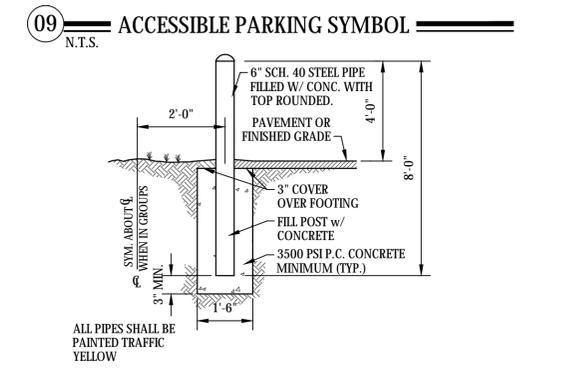
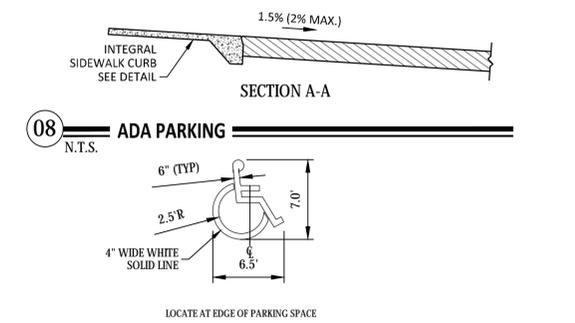
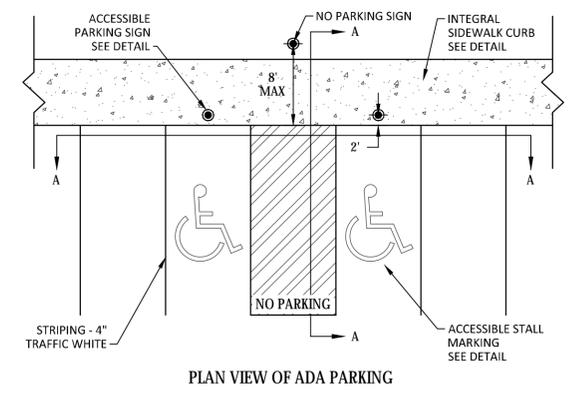
Sheet No. Revision
C6.01

Project No. 21978

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. BY CONTRACTING THE NOTIFICATION CENTER FORMER STATE ONE FOR MINNESOTA, THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRABN THE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND IF THE LINE IS ACTIVE. NO DRABN THE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

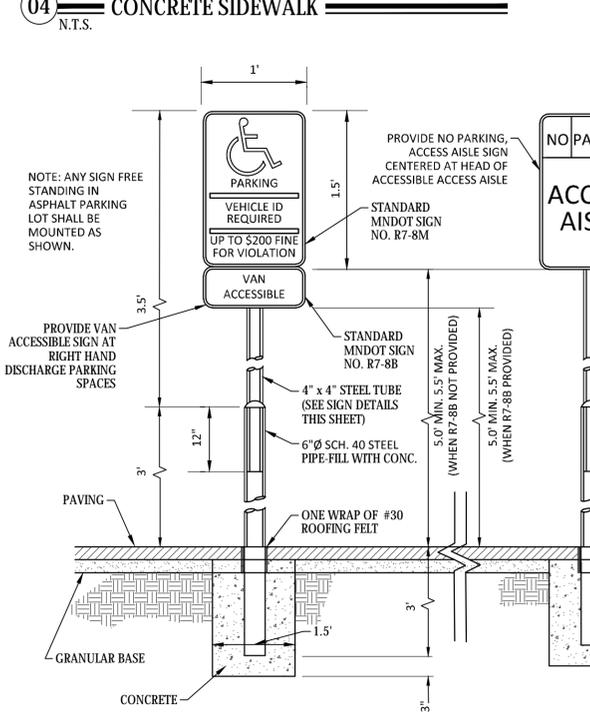
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

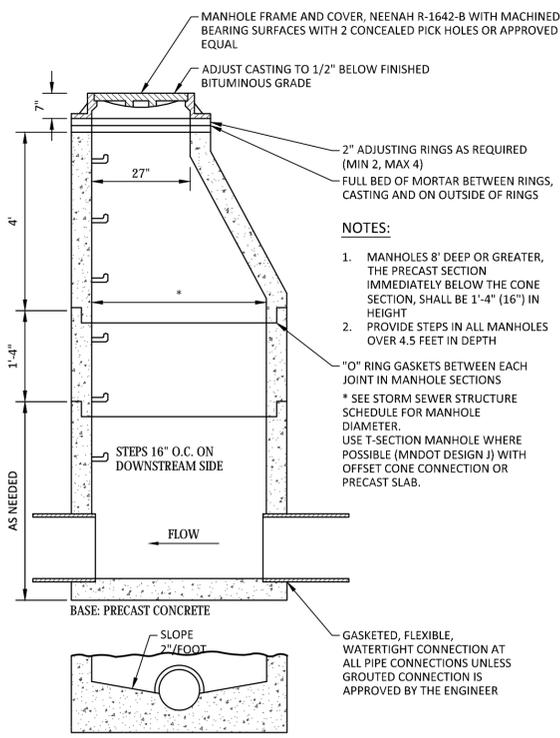


GENERAL NOTES FOR CONCRETE CONSTRUCTION:

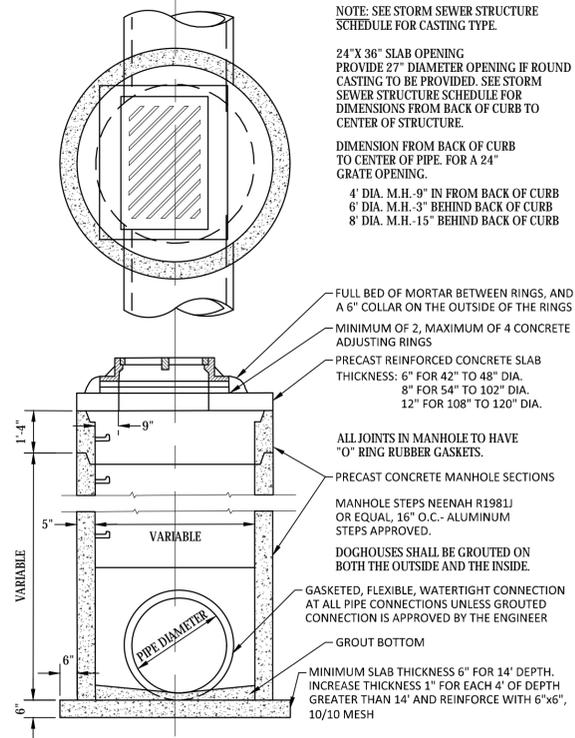
1. THE CONCRETE SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF MN/DOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION".
2. SIDEWALK CONTROL JOINTS SHALL BE LOCATED AT 5 FEET ON CENTER. SIDEWALK EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM OF 100 FEET ON CENTER, AND WHERE SIDEWALK ABUTS CURB, STRUCTURES, AND OTHER FIXED OBJECTS. SEAL ALL EXPANSION JOINTS. BROOM FINISH SHALL BE PERPENDICULAR TO THE LINE OF TRAFFIC.

*THE THICKNESS SHALL BE INCREASED TO A MINIMUM DEPTH OF _____ INCHES AT DRIVEWAY CROSSINGS.

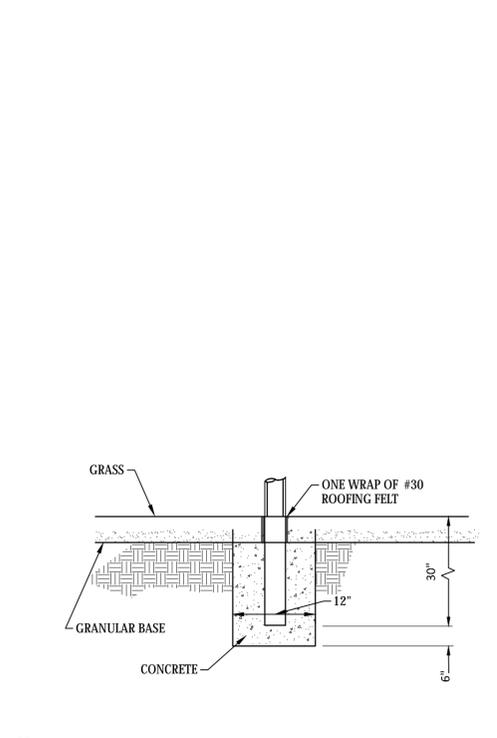




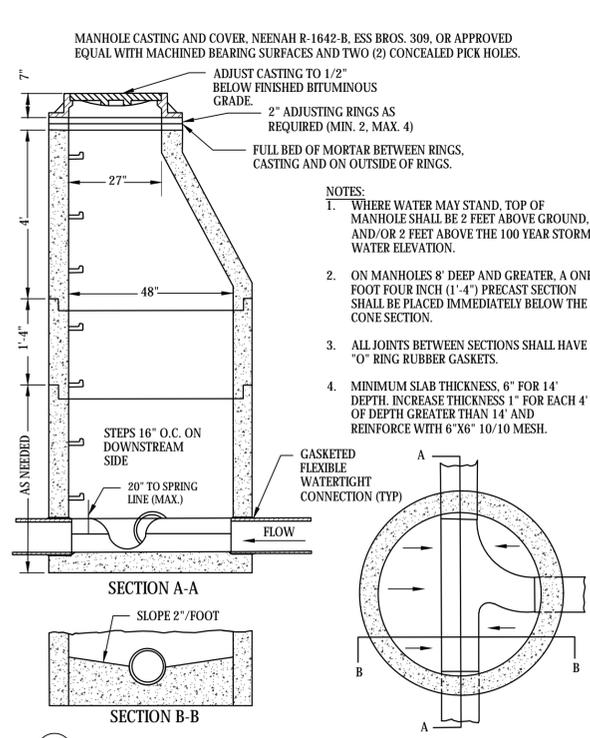
13 STORM SEWER MANHOLE
N.T.S.



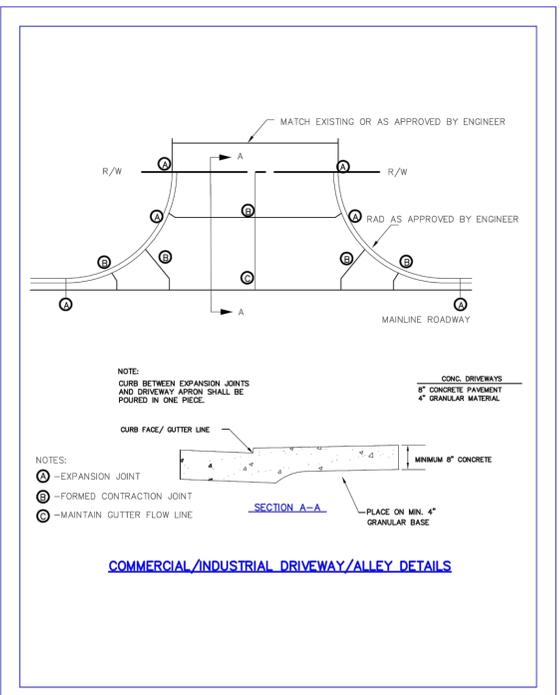
14 CATCH BASIN MANHOLE
N.T.S.



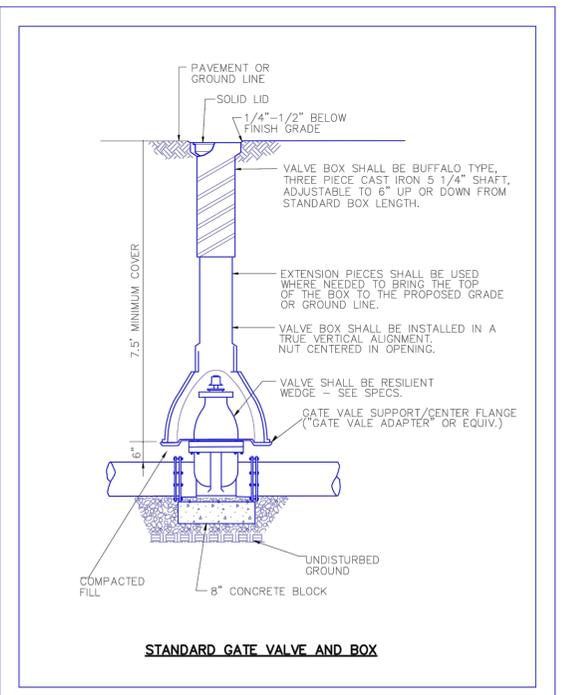
15 SIGN POST EMBEDMENT ASSEMBLY
N.T.S.



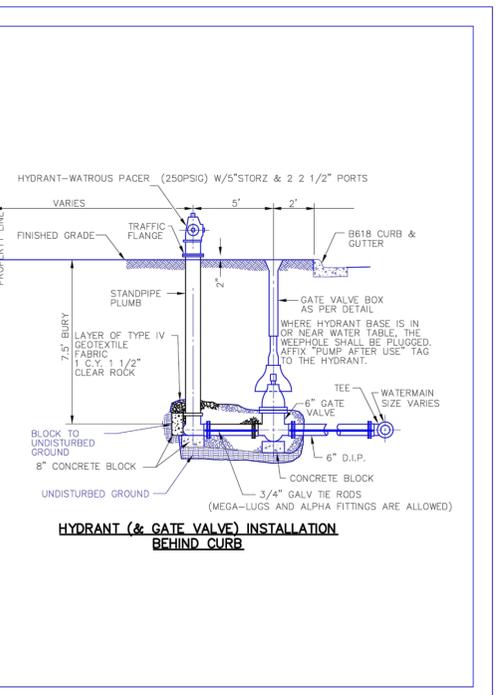
16 STANDARD SANITARY SEWER MANHOLE
N.T.S.



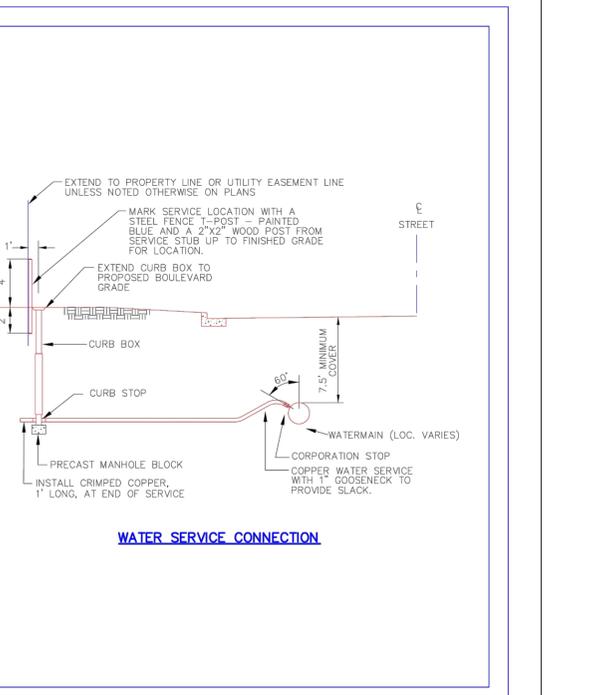
CITY OF CRYSTAL STANDARD DRAWING
DRAWING# DRIVE-COMM
COMMERCIAL DRIVEWAY INSTALLATION
DRAWN-MAY 21, 2018
REVISION DATE-



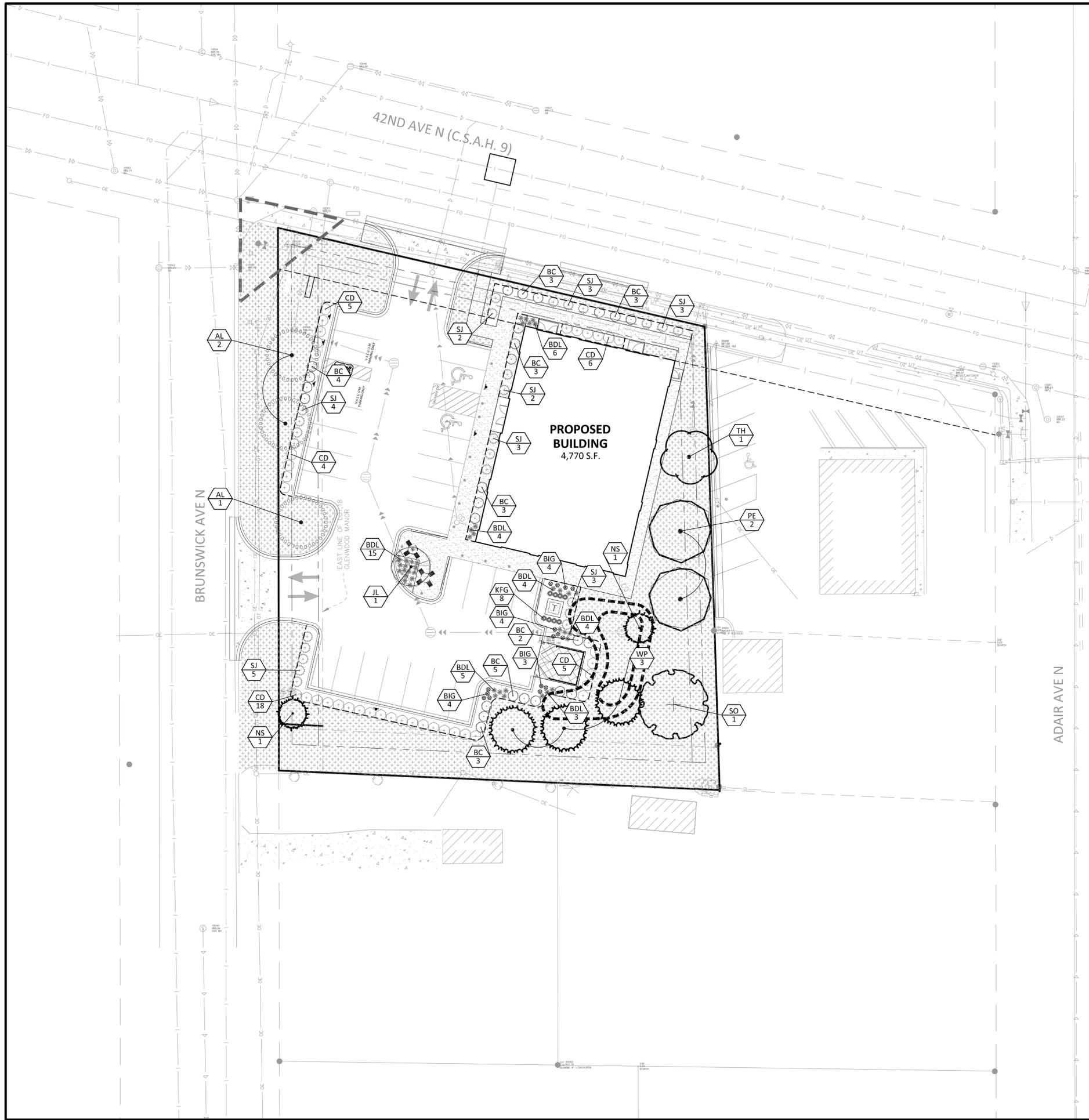
CITY OF CRYSTAL STANDARD DRAWING
DRAWING# GATE-VALVE
GATE VALVE INSTALLATION
DRAWN-MAY 18, 2018
REVISION DATE-



CITY OF CRYSTAL STANDARD DRAWING
DRAWING# HYDRANT
HYDRANT AND GATE VALVE INSTALLATION
DRAWN-MAY 18, 2018
REVISION DATE-



CITY OF CRYSTAL STANDARD DRAWING
DRAWING# WAT-SVC
WATER SERVICE INSTALLATION
DRAWN-MAY 18, 2018
REVISION DATE-



LEGEND

PROPOSED	EXISTING	
PROPERTY LIMIT	---	STANDARD DUTY ASPHALT PAVING
CURB & GUTTER	---	CONCRETE PAVING
EASEMENT	---	CONCRETE SIDEWALK
BUILDING	---	
RETAINING WALL	---	
WETLAND LIMITS	---	
TREELINE	---	
LANDSCAPE EDGING	---	
STORM SEWER	---	
SANITARY SEWER	---	
FORCEMAIN (SAN.)	---	
WATERMAIN	---	
YARDDRAIN	---	
PIPE BOLLARD	---	
RIPRAP	---	

CRYSTAL LANDSCAPE CODE

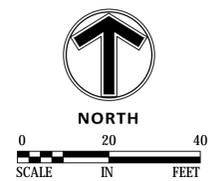
CALCULATIONS	REQUIRED	PROPOSED
ONE TREE PER 30 LF OF FRONTAGE	12	12
SHRUBS		146

DECIDUOUS TREES 2" Cal.
ORNAMENTAL TREES 2" Cal.
ONE SHADE TREE FOR EVERY 30 LINEAR FEET
ONE OVERSTORY DECIDUOUS TREE FOR EVERY 30' OF LOT FRONTAGE
SHRUBS SHALL BE PLANTED ALONG BUILDING FOUNDATION THAT IS VISIBLE FROM THE PUBLIC STREET

TREES ON SITE	MAXIMUM % OF TREES THAT MAY BE SINGLE SPECIES
7-19	35%

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	CONT	CAL	SIZE	QTY
	TH	Gleditsia triacanthos inermis / Thornless Honeylocust	B & B			1
	SO	Quercus bicolor / Swamp White Oak	B & B	2.5" Cal		1
	AL	Tilia americana / American Linden	B & B			3
	PE	Ulmus americana 'Princeton' / American Elm	B & B	2.5" Cal		2
CONIFERS	CODE	BOTANICAL / COMMON NAME	CONT	CAL	SIZE	QTY
	NS	Picea abies / Norway Spruce	B & B		6"	2
	WP	Pinus strobus / White Pine	B & B		6"	3
ORN. TREES	CODE	BOTANICAL / COMMON NAME	CONT	CAL	SIZE	QTY
	JL	Syringa reticulata / Japanese Tree Lilac	B & B	2" Cal		1
SHRUBS	CODE	BOTANICAL / COMMON NAME	CONT			QTY
	BC	Aronia melanocarpa 'Autumn Magic' / Autumn Magic Black Chokeberry	5 gal			26
	CD	Cornus sericea 'Alleman's Compact' / Dwarf Red Twig Dogwood	5 gal			38
	SJ	Juniperus sabina 'Scandia' / Scandia Juniper	5 gal			25
GRASSES	CODE	BOTANICAL / COMMON NAME	CONT			QTY
	KFG	Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass	1 gal			8
PERENNIALS	CODE	BOTANICAL / COMMON NAME	CONT			QTY
	BIG	Geranium x cantabrigiense 'Biokovo' / Biokovo Cranesbill	1 gal			15
	BDL	Hemerocallis x 'Baja' / Baja Daylily	1 gal			41
GROUND COVERS	CODE	BOTANICAL / COMMON NAME	CONT			QTY
	TUR HIG	Turf Sod Highland Sod / Sod	Sod			13,358 sf



Client
LINN
INVESTMENT
PROPERTIES, LLC

Project
TUMBLE FRESH

Location
CRYSTAL, MN

6023 42ND AVE N

Certification

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly licensed LANDSCAPE ARCHITECT under the laws of the State of Minnesota.

William L. DeLeon
Registration No. 12332 Date: MM/DD/2019

This certification is not valid unless wet signed in blue ink. If applicable, contact us for a wet signed copy of this survey which is available upon request at Sambatek, Minnetonka, MN office.

Summary

Designed: MJ Drawn: MJ
Approved: JEB Book / Page:
Phase: PRELIMINARY Initial Issue: 12/17/2019

Revision History

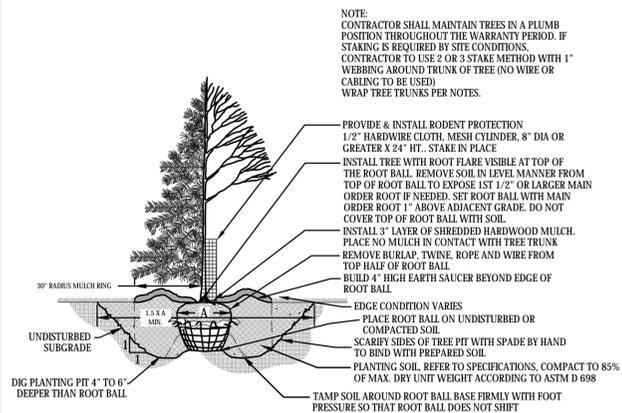
No.	Date By	Submittal / Revision
1	01/02/20 AJR	CITY COMMENTS

Sheet Title
LANDSCAPE
DETAILS AND
NOTES

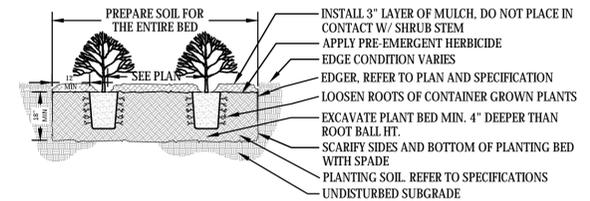
Sheet No. Revision

L1.02

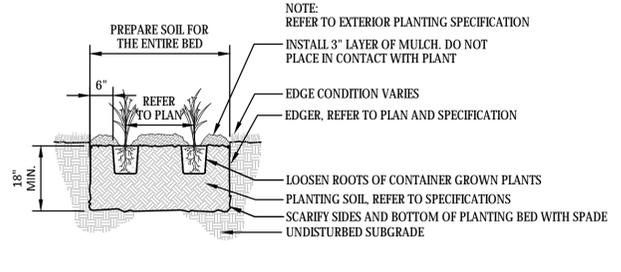
Project No. 21978



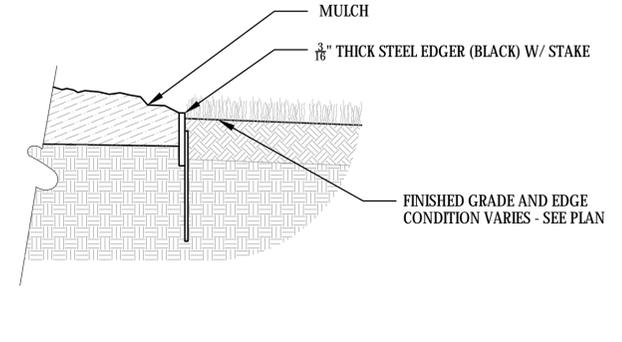
1 TREE PLANTING DETAIL
L1.02 1/4" = 1'-0" P-01



2 SHRUB PLANTING DETAIL
L1.02 3/8" = 1'-0" P-02



3 PERENNIAL PLANTING DETAIL
L1.02 1/2" = 1'-0" P-03



4 STEEL EDGER
L1.02 1 1/2" = 1'-0" P-04

NOTES

GENERAL NOTES:

- THE CONTRACTOR SHALL INSPECT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF THE WORK.
- THE CONTRACTOR SHALL VERIFY PLAN LAYOUT AND BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN OR INTENT OF THE LAYOUT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS, AND PERMITS GOVERNING THE WORK.
- THE CONTRACTOR SHALL PROTECT EXISTING ROADS, CURBS/GUTTERS, TRAILS, TREES, LAWNS AND SITE ELEMENTS DURING CONSTRUCTION. DAMAGE TO SAME SHALL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- LOCATE AND VERIFY ALL UTILITIES, INCLUDING IRRIGATION LINES, WITH THE OWNER FOR PROPRIETARY UTILITIES AND GOPHER STATE ONE CALL 48 HOURS BEFORE DIGGING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGES TO SAME. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS TO FACILITATE PLANT RELOCATION.
- THE LANDSCAPE CONTRACTOR SHALL COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON SITE.
- THE CONTRACTOR SHALL REVIEW THE SITE FOR DEFICIENCIES IN SITE CONDITIONS WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR WARRANTY. UNDESIRABLE SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK.
- THE PLAN TAKES PRECEDENCE OVER THE LANDSCAPE LEGEND IF DISCREPANCIES EXIST. QUANTITIES SHOWN IN THE PLANTING SCHEDULE ARE FOR THE CONTRACTOR'S CONVENIENCE. CONTRACTOR TO VERIFY QUANTITIES SHOWN ON THE PLAN.
- THE SPECIFICATIONS TAKE PRECEDENCE OVER THE PLANTING NOTES AND GENERAL NOTES.
- EXISTING TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED TO THE DRIP LINE FROM ALL CONSTRUCTION TRAFFIC, STORAGE OF MATERIALS ETC. WITH 4' HT. ORANGE PLASTIC SAFETY FENCING ADEQUATELY SUPPORTED BY STEEL FENCE POSTS 6" O.C. MAXIMUM SPACING.
- LONG-TERM STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED.
- CONTRACTOR SHALL REQUEST IN WRITING, A FINAL ACCEPTANCE INSPECTION.

PLANTING NOTES:

- NO PLANTS SHALL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- A GRANULAR PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AT THE MANUFACTURER'S RECOMMENDED RATE PRIOR TO PLANT INSTALLATION.
- ALL PLANTING STOCK SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI-Z60, LATEST EDITION, OF THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIALS.
- OVERSTORY TREES SHALL BEGIN BRANCHING NO LOWER THAN 6' ABOVE PAVED SURFACES.
- ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE AND BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE LANDSCAPE LEGEND.
- PLANT MATERIALS TO BE INSTALLED PER PLANTING DETAILS.
- ALL TREES MUST BE STRAIGHT TRUNKED AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
- THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING, OR AFTER INSTALLATION.
- NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE ACCEPTED UNLESS APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.

- ALL PLANT MATERIAL QUANTITIES, SHAPES OF BEDS AND LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN AND ADJUSTED TO CONFORM TO THE EXACT CONDITIONS OF THE SITE. THE LANDSCAPE ARCHITECT SHALL APPROVE THE STAKING LOCATION OF ALL PLANT MATERIALS PRIOR TO INSTALLATION.
- ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
- MULCH: SHREDDED HARDWOOD MULCH, CLEAN AND FREE OF NOXIOUS WEEDS OR OTHER DELETERIOUS MATERIAL, IN ALL MASS PLANTING BEDS AND FOR TREES, UNLESS INDICATED AS ROCK MULCH ON DRAWINGS. SUBMIT SAMPLE TO LANDSCAPE ARCHITECT PRIOR TO DELIVERY ON-SITE FOR APPROVAL. DELIVER MULCH ON DAY OF INSTALLATION. USE 3" FOR SHRUB BEDS, TREE RINGS, AND 3" FOR PERENNIAL/GROUND COVER BEDS, UNLESS OTHERWISE DIRECTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MULCHES AND PLANTING SOIL QUANTITIES TO COMPLETE THE WORK SHOWN ON THE PLAN.
- USE ANTI-DESICCANT (WILT-PRUF OR APPROVED EQUIV) ON DECIDUOUS PLANTS MOVED IN LEAF AND FOR EVERGREENS MOVED ANYTIME. APPLY AS PER MANUFACTURER'S INSTRUCTION. ALL EVERGREENS SHALL BE SPRAYED IN THE LATE FALL FOR WINTER PROTECTION DURING WARRANTY PERIOD.
- WRAP ALL SMOOTH-BARKED DECIDUOUS TREES PLANTED IN THE FALL PRIOR TO DECEMBER 1 AND REMOVE WRAPPING AFTER MAY 1. TREE WRAPPING MATERIAL SHALL BE WHITE TWO-WALLED PLASTIC SHEETING APPLIED FROM TRUNK FLARE TO THE FIRST BRANCH.
- ALL DECIDUOUS, PINE, AND LARCH PLANTINGS SHALL RECEIVE RODENT PROTECTION PER MNDOT 2571.31.2
- PLANTING SOIL FOR TREES, SHRUBS AND GROUND COVERS: FERTILE FRIABLE LOAM CONTAINING A LIBERAL AMOUNT (4% MIN.) OF HUMUS AND CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. IT SHALL COMPLY WITH MNDOT SPECIFICATION 3877 TYPE B SELECT TOPSOIL. MIXTURE SHALL BE FREE FROM HARDPACK SUBSOIL, STONES, CHEMICALS, NOXIOUS WEEDS, ETC. SOIL MIXTURE SHALL HAVE A PH BETWEEN 6.1 AND 7.5 AND 10-0-10 FERTILIZER AT THE RATE OF 3 POUNDS PER CUBIC YARD. IN PLANTING BEDS INCORPORATE THIS MIXTURE THROUGHOUT THE ENTIRE BED IN A 6" LAYER AND ROTO-TILLING IT INTO THE TOP 12" OF SOIL AT A 1:1 RATIO. ANY PLANT STOCK NOT PLANTED ON DAY OF DELIVERY SHALL BE HELED IN AND WATERED UNTIL INSTALLATION. PLANTS NOT MAINTAINED IN THIS MANNER WILL BE REJECTED.
- CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT EACH EXCAVATED TREE AND SHRUB PIT WILL PERCOLATE PRIOR TO INSTALLING PLANTING MEDIUM AND PLANTS. THE CONTRACTOR SHALL FILL THE BOTTOM OF SELECTED HOLES WITH SIX INCHES OF WATER AND CONFIRM THAT THIS WATER WILL PERCOLATE WITHIN A 24-HOUR PERIOD. IF THE SOIL AT A GIVEN AREA DOES NOT DRAIN PROPERLY, A PVC DRAIN OR GRAVEL SUMP SHALL BE INSTALLED OR THE PLANTING SHALL BE RELOCATED IF DIRECTED BY THE LANDSCAPE ARCHITECT.
- ALL PLANTS SHALL BE GUARANTEED FOR TWO COMPLETE GROWING SEASONS (APRIL 1 - NOVEMBER 1), UNLESS OTHERWISE SPECIFIED. THE GUARANTEE SHALL COVER THE FULL COST OF REPLACEMENT INCLUDING LABOR AND PLANTS.
- CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 3 DAYS PRIOR TO PLANNED DELIVERY. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 24 HOURS IN ADVANCE OF BEGINNING PLANT INSTALLATION.
- SEASONS/TIME OF PLANTING AND SEEDING: NOTE: THE CONTRACTOR MAY ELECT TO PLANT IN OFF-SEASONS ENTIRELY AT HIS/HER RISK.

21.1. POTTED PLANTS:	4/1 - 6/1; 9/21 - 11/1
21.2. DECIDUOUS /B&B:	4/1 - 6/1; 9/21 - 11/1
21.3. EVERGREEN POTTED PLANTS:	4/1 - 6/1; 9/21-11/1

- EVERGREEN B&B: 4/1 - 5/1; 9/21 - 11/1
- TURF/LAWN SEEDING: 4/1 - 6/1; 7/20 - 9/20
- NATIVE MIX SEEDING: 4/15 - 7/20; 9/20-10/20

- MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PORTION OF THE WORK IS IN PLACE. PLANT MATERIAL SHALL BE PROTECTED AND MAINTAINED UNTIL THE INSTALLATION OF THE PLANTS IS COMPLETE. INSPECTION HAS BEEN MADE, AND PLANTINGS ARE ACCEPTED EXCLUSIVE OF THE GUARANTEE. MAINTENANCE SHALL INCLUDE WATERING, CULTIVATING, MULCHING, REMOVAL OF DEAD MATERIALS, RE-SETTING PLANTS TO PROPER GRADE AND KEEPING PLANTS IN A PLUMB POSITION. AFTER ACCEPTANCE, THE OWNER SHALL ASSUME MAINTENANCE RESPONSIBILITIES. HOWEVER, THE CONTRACTOR SHALL CONTINUE TO BE RESPONSIBLE FOR KEEPING THE TREES PLUMB THROUGHOUT THE GUARANTEE PERIOD.
- ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFLOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL LANDSCAPE LEGEND SPECIFICATIONS.
- WATERING: MAINTAIN A WATERING SCHEDULE WHICH WILL THOROUGHLY WATER ALL PLANTS ONCE A WEEK, IN EXTREMELY HOT, DRY WEATHER. WATER MORE OFTEN AS REQUIRED BY INDICATIONS OF HEAT STRESS SUCH AS WILTING LEAVES. CHECK MOISTURE UNDER MULCH PRIOR TO WATERING TO DETERMINE NEED. CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR WATER.

TURF NOTES:

- TURF ESTABLISHMENT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROVISIONS OF THE MNDOT 2105 AND 2575 EXCEPT AS MODIFIED BELOW:
- ALL AREAS TO RECEIVE SOD SHALL ALSO RECEIVE 6" OF TOPSOIL PRIOR TO INSTALLING SOD. TOPSOIL SHALL BE FREE OF TREE ROOTS, STUMPS, BUILDING MATERIAL, AND TRASH, AND SHALL BE FREE OF STONES LARGER THAN 1 1/2" INCHES IN ANY DIMENSION.
 - WHERE SOD ABUTS PAVED SURFACES, FINISHED GRADE OF SOD/SEED SHALL BE HELD 1" BELOW SURFACE ELEVATION OF TRAIL, SLAB, CURB, ETC.
 - SOD SHALL BE LAID PARALLEL TO THE CONTOURS AND SHALL HAVE STAGGERED JOINTS. ON SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES, SOD SHALL BE STAKED SECURELY.
 - TURF ON ALL OTHER AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED BY SEEDING, MULCHING AND FERTILIZING. SEED MIXTURE NO.25-151 WILL BE PLACED AT THE RATE OF 120 POUNDS PER ACRE.
 - ALL DISTURBED AREAS TO BE TURF SEED, ARE TO RECEIVE 6" TOP SOIL, SEED, MULCH, AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. FOR SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES INSTALL EROSION CONTROL BLANKET.
 - ALL DISTURBED AREAS TO RECEIVE NATIVE SEED, ARE TO RECEIVE PLANTING SOIL, SEED, MULCH, AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. FOR SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES INSTALL EROSION CONTROL BLANKET.

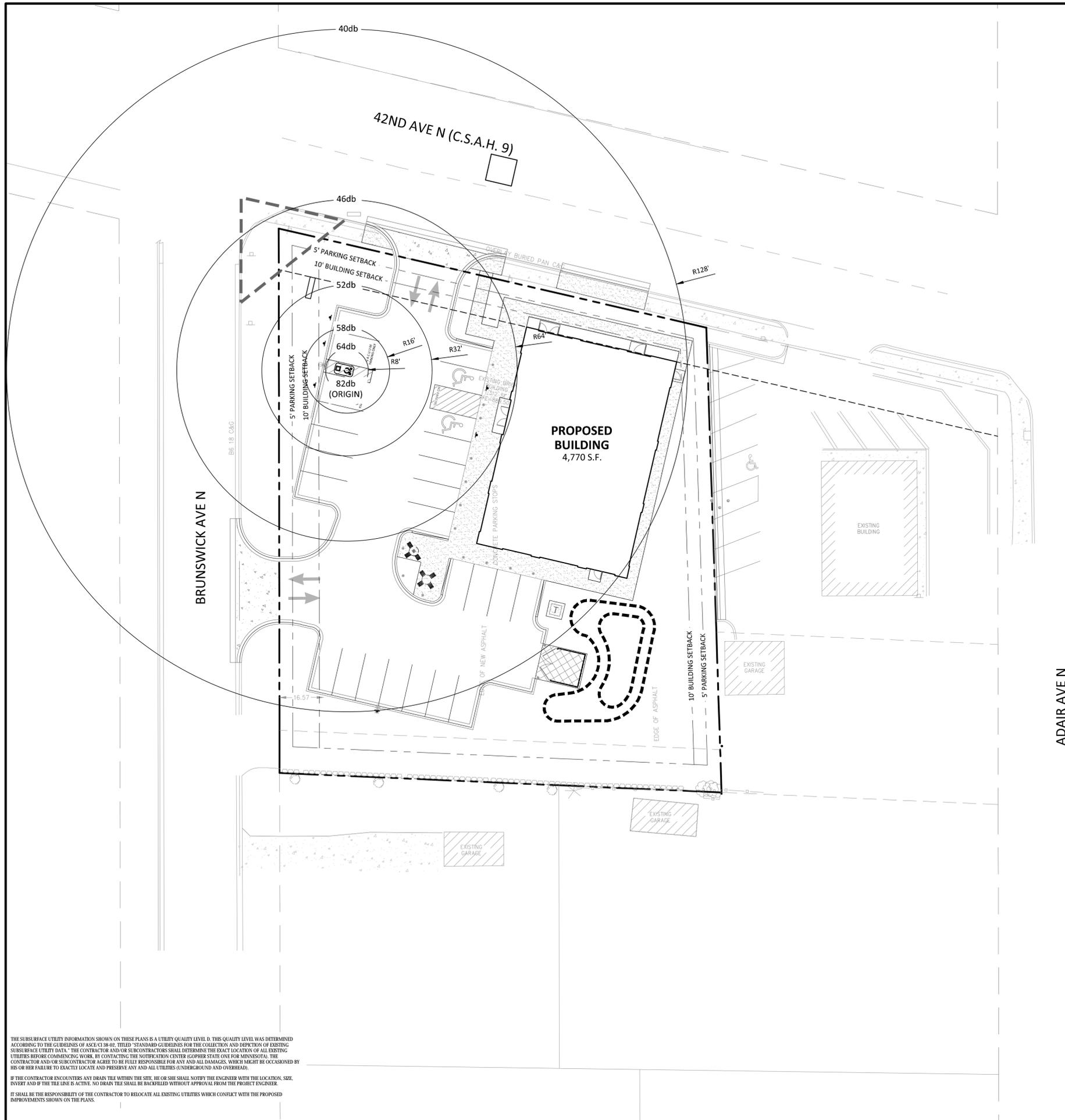
GENERAL TREE SPECIFICATIONS:

- ALL STREET AND PARKING LOT TREES SHALL BE LIMBED UP TO THE FOLLOWING HEIGHTS:
 - 2" CAL. TREES: LOWEST BRANCH 6' HT.
 - 3" CAL. + TREES: LOWEST BRANCH 7' HT.
- TREE CANOPY WIDTH SHALL BE RELATIVE TO HEIGHT/CALIPER OF TREE AND TYPE OF TREE.
 - 1" CALIPER/6-8' HT: 3-4' WIDTH MIN.

- 2" CALIPER/12-14' HT: 4-5' WIDTH MIN.
- 3" CALIPER/14-16' HT: 6-7' WIDTH MIN.
- CANOPY TREES SHALL NOT HAVE CO-DOMINATE LEADERS IN LOWER HALF OF TREE CROWN.
- ALL TREES SHALL HAVE SYMMETRICAL OR BALANCED BRANCHING ON ALL SIDES OF THE TREE.
- TREES SHALL NOT BE TIPPED PRUNED.
- TREES SHALL BE FREE OF PHYSICAL DAMAGE FROM SHIPPING AND HANDLING. DAMAGED TREES SHALL BE REJECTED.
- SUMMER DUG TREES SHALL HAVE ROOTBALL SIZE INCREASED BY 20%
- TREES WHICH EXCEED RECOMMENDED CALIPER TO HEIGHT RELATIONSHIP SHALL BE REJECTED.

IRRIGATION NOTES:

- IRRIGATION SYSTEM TO BE DESIGN/BUILD. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL OF SYSTEM LAYOUT PRIOR TO INSTALLATION.
- ALL SOD TO RECEIVE SPRAY OR ROTOR IRRIGATION HEADS WITH MINIMUM DESIGN OF 1" IRRIGATION PER WEEK.
- ALL PLANT BEDS TO RECEIVE DRIP LINE IRRIGATION, WITH A MINIMUM DESIGN OF .25" IRRIGATION PER WEEK.
- CONTRACTOR TO INSTALL A TOTAL OF 4 QUICK COUPLERS AT THE CORNERS OF THE PROPERTY. A 2.5" TYPE K SOURCE PIPE IS PROVIDED BY MECHANICAL.



MANUFACTURER INDICATES VACUUM EMITS 82db.

SOUND LEVEL DECREASES BY 6db EVERY TIME DISTANCE FROM SOURCE DOUBLES.

FOR COMPARISON, THE SOUND OF A CAR PASSING ON THE STREET IS GENERALLY 70db AT 50 FT FROM THE SOURCE.

**IT IS OF NOTE THAT THESE ESTIMATES DO NOT TAKE PROPOSED SITE LANDSCAPING INTO CONSIDERATION. SITE LANDSCAPING SHOULD WORK TO FURTHER DIMINISH NOISE LEVELS TO THE ADJACENT PROPERTIES.



12800 Whitewater Drive, Suite 300
 Minnetonka, MN 55343
 763.476.6010 telephone

Engineering | Surveying | Planning | Environmental

Client
 LINN
 INVESTMENT
 PROPERTIES, LLC

Project
 TUMBLE FRESH

Location
 CRYSTAL, MN

6023 42ND AVE N

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Minnesota.

Joshua E. Baker
 Registration No. 1979 Date: MM/DD/2019

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

Summary

Designed: MJJ Drawn: MJJ
 Approved: JEB Book / Page:
 Phase: PRELIMINARY Initial Issue: 12/17/2019

Revision History

No.	Date	By	Submittal / Revision
1	01/02/20	AJR	CITY COMMENTS

Sheet Title
 VACUUM NOISE
 EXHIBIT

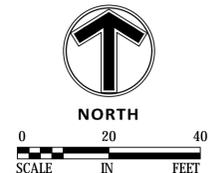
Sheet No. Revision
 X1.01

Project No. 21978

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. BY CONTACTING THE NOTIFICATION CENTER (FOR THE STATE OF MINNESOTA), THE CONTRACTOR AND/OR SUBCONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRABN THE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND IF THE LINE IS ACTIVE, NO DRABN THE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

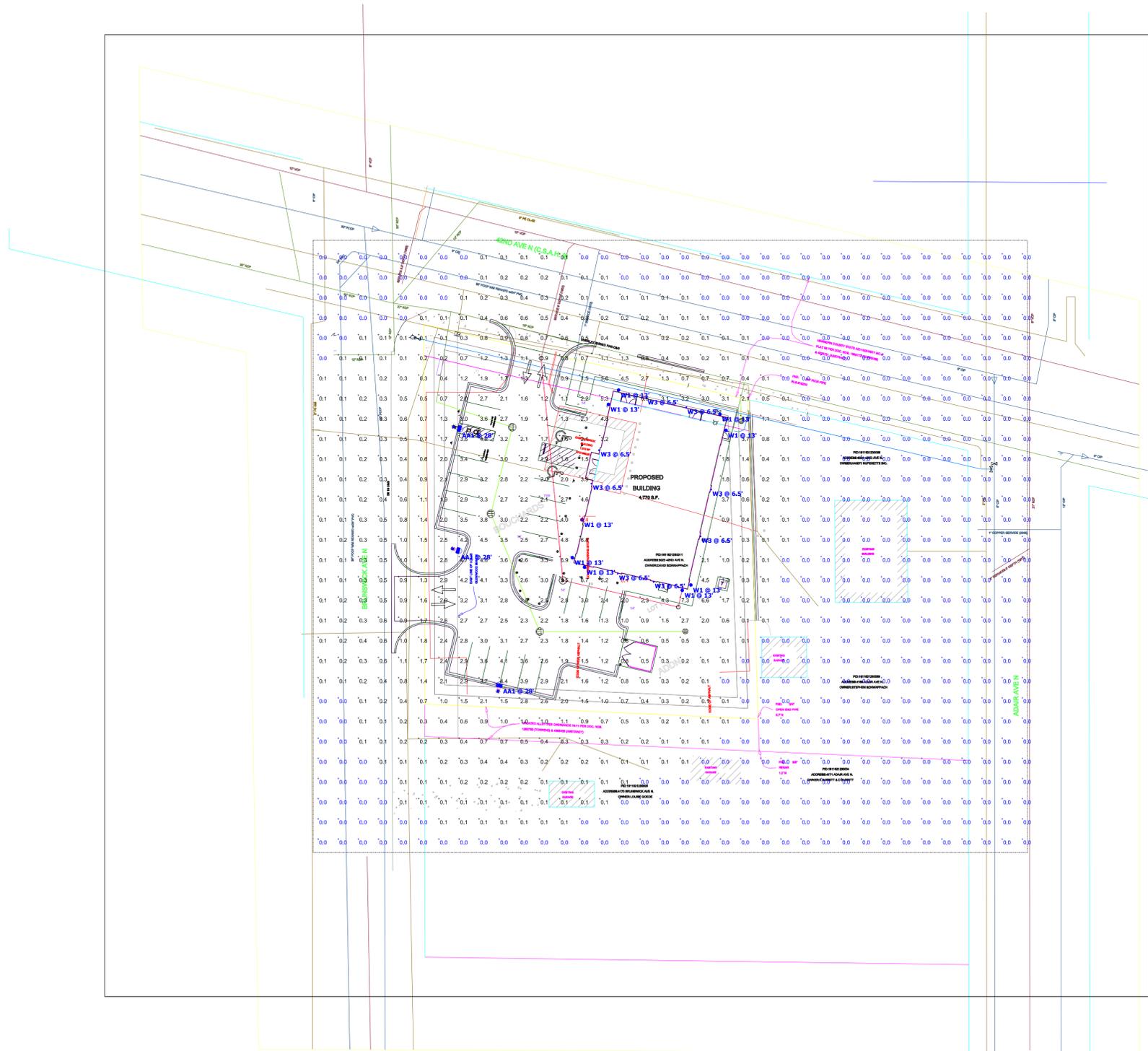
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



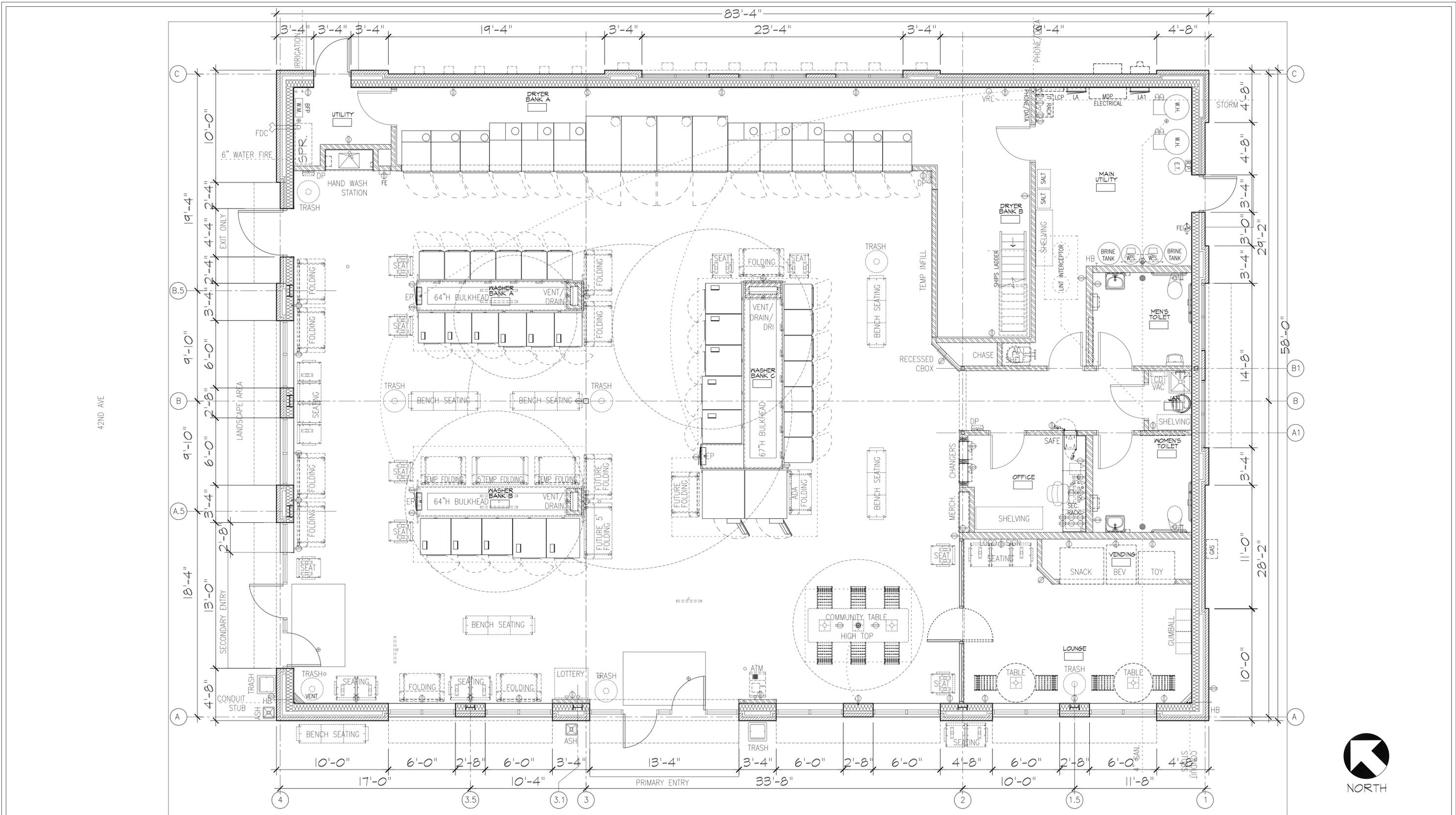
Schedule														
Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Lumen Multiplier	Light Loss Factor	Wattage	Efficiency	Distribution	Notes
	AA1		3	Lithonia Lighting	RSX1 LED P4 40K R4	RSX Area Fixture Size 1 P4 Lumen Package 4000K CCT Type R4 Distribution	1	16573	1	0.9	133.14	100%	TYPE IV, SHORT, BUG RATING: B2 - U0 - G3	
	W1		9	ANP Lighting	MBVB16M024LDDW40K	16.0° ANGLE MINI BELLA VISTA 24W Cree LMH02B Module - 4000K CCT - Wide Distribution	1	3145	1	0.9	29.91	100%		
	W2		0	Lithonia Lighting	WST LED P3 40K VW HVOLT	WST LED, Performance package 3, 4000 K, visual comfort wide, HVOLT	1	6689	1	0.9	58	100%	TYPE II, VERY SHORT, BUG RATING: B1 - U0 - G1	
	W3		8	Lithonia Lighting	OVWP LED 40K 120 PE BZ	LED Wallpack - OPP Home Center	1	1266	1	0.9	14.1	100%	SEMI-DIRECT, SC=0=1.95, SC=90=1.25	

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Total Area @ Grade	+	0.6 fc	8.4 fc	0.0 fc	N/A	N/A

- Note**
- Davis and Associates, Inc does not assume responsibility for the interpretation of this calculation, or compliance to local or state lighting codes and ordinances.
 - All readings/calculations are shown @ grade.
 - Fixture heights are shown on plan.



Plan View
Scale - 1" = 30ft



ARCHITECTURAL CONSORTIUM L.L.C.
 901 North 3rd Street
 Minneapolis, MN 55401
 612-436-4030
 Fax 612-692-9960

PREPARED FOR:

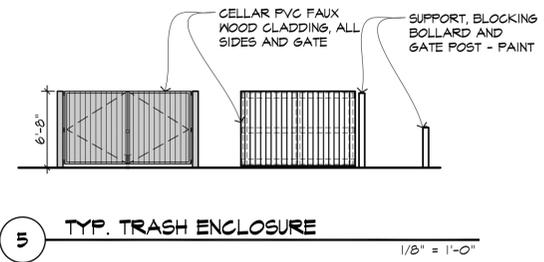
 LINN INVESTMENT PROPERTIES LLC
 9616 Currel Blvd, Ste 245
 Woodbury, MN 55125
 651.731.0515

TUMBLE FRESH COIN LAUNDRY
 6023 42ND AVE N
 CRYSTAL, MN 55422

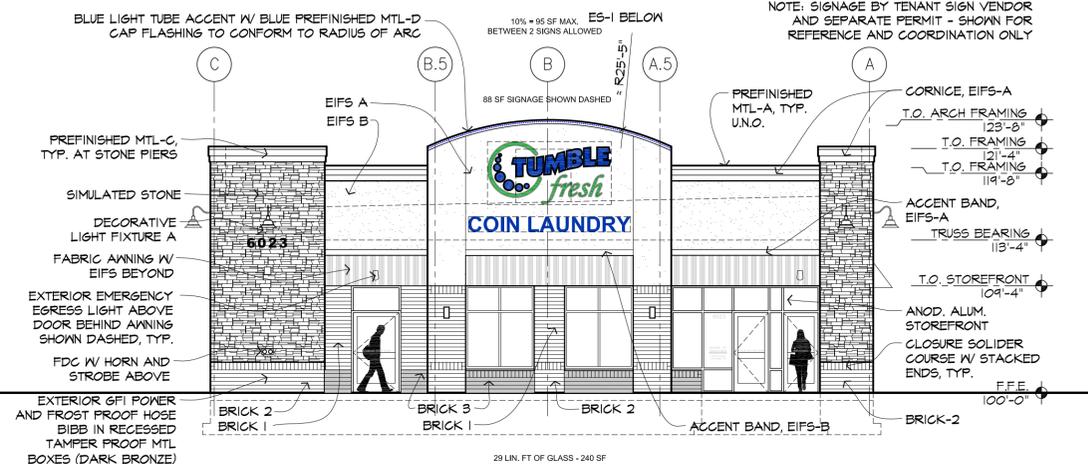
PROPOSED FLOOR PLAN
 SCALE: 1/8" = 1'-0" @ 22X34
 1/16" = 1'-0" @ 11X17

PROJECT NUMBER: 19-1063-01
 ISSUED DATE: 12/12/19
 DRAWN BY: ES
 CHECKED BY: KA
A2.1

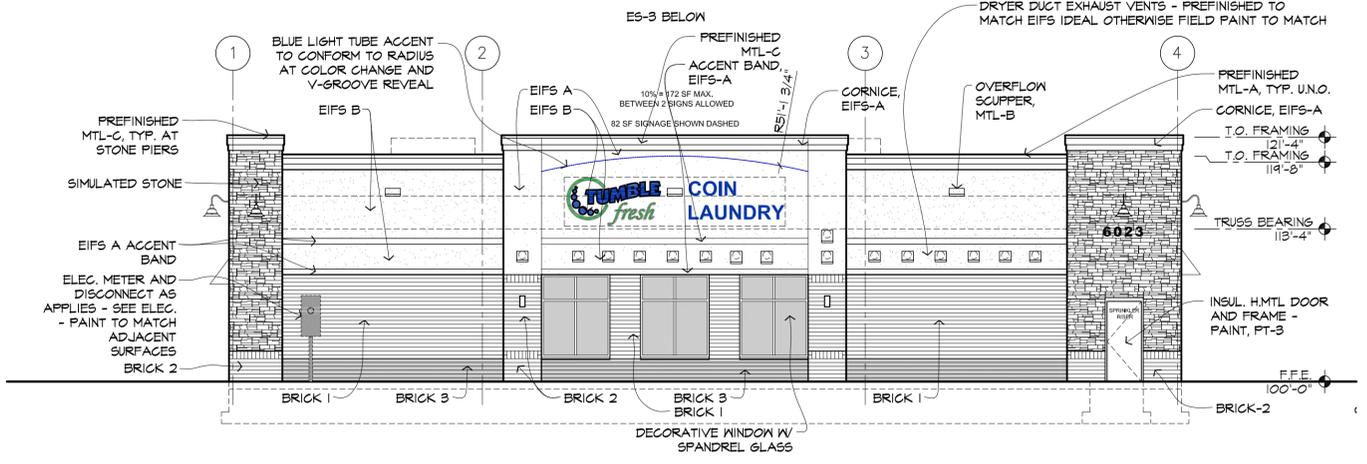
NOTES AND EXTERIOR MATERIALS LEGEND		NOTES:	
BRICK-1 (MEDIUM) BELDEN NUTMEG-VELOUR A UTILITY	BRICK-1 (MEDIUM) INTERSTATE DESERT SAND MATTE UTILITY	1. MORTAR @ STONE AND BRICK TO BE NATURAL GRAY.	8. PAINT ANY EXPOSED STL AT OPENINGS TO MATCH ADJACENT MATERIAL.
BRICK-2 (LIGHT) BELDEN WHEATFIELD VELOUR A UTILITY AND CLOSURE	BRICK-2 (LIGHT) ENDICOTT COOPERTONE VELOUR UTILITY AND CLOSURE	2. SEPARATE PERMIT REQUIRED FOR SIGNAGE. COORD. W/ OWNER & SIGN COMPANY.	9. FINISH MASONRY SHOULD EXTEND AT LEAST 6" MIN. BELOW F.F.E.
BRICK-3 (DARK BASE) BELDEN SEAL BROWN UTILITY AND CLOSURE	BRICK-3 (DARK BASE) BELDEN SEAL BROWN UTILITY AND CLOSURE	3. EXT. H.M. DOORS & FRAMES TO BE PAINTED	10. TENANT SIGNAGE IS SHOWN FOR REFERENCE ONLY AND SHALL BE UNDER SEPARATE PERMIT AS REQ'D BY CITY AND IN CONFORMANCE WITH THE COMPREHENSIVE SIGN PLAN.
EIFS-A: DRYVIT #4TBA "SAND"		4. TRASH BOLLARDS & STEEL / BLOCKING AT INTERIOR OF TRASH ENCLOSURE TO BE PAINTED FT-3	11. ALL OPENINGS, FLASHING, COUNTER FLASHING, AND EXPANSION JOINTS SHALL BE WATER TIGHT.
EIFS-B: DRYVIT #12 "SANDWOOD BEIGE"		5. ALL SEALANTS TO BE COLOR MATCHED TO ADJACENT MATERIALS. SUBMIT PROPOSED SCHEDULE AND MRF'S FULL RANGE OF COLORS TO ARCHITECT FOR REVIEW.	12. ALL OPEN JOINTS, PENETRATIONS, AND OTHER OPENINGS IN THE BUILDING ENVELOPE SHALL BE SEALED, CAULKED, GASKETED OR WEATHERSTRIPPED TO LIMIT AIR LEAKAGE AND WATER / MOISTURE INFILTRATION.
PT-1 (FIELD) TO MATCH BRICK-1		6. ALL HORIZONTAL EIFS SURFACES TO BE SLOPED FOR DRAINAGE.	13. CONTROL JOINTS (CJ) SHALL UTILIZE COLOR MATCHED HIGH MOVEMENT SEALANT AND BACKERRODS AT EXPOSED FACED. ADDITIONAL JOINT TREATMENT REQUIRED AT EXTERIOR SHEATHING AND INTERIOR. JOINTS MUST ALLOW FOR VERTICAL MOVEMENT.
PT-2 (DARK BASE) TO MATCH BRICK-2		7. PROVIDE BACKER ROD AND SEALANT AT ALL MATERIAL CHANGES.	14. APPLY COMPATIBLE SEALER OVER SIMULATED STONE AND MORTAR ONCE FULLY INSTALLED, CURED AND CLEANED PER MFR'S RECOMMENDATIONS.
PT-3 (FIELD) TO MATCH EIFS-B			15.



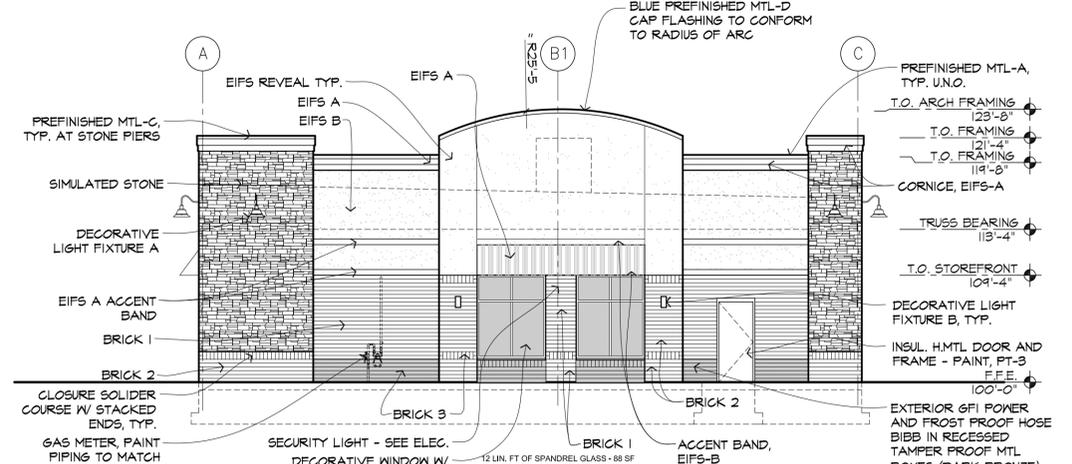
4 WEST ELEVATION
FACING BRUNSWICK
1/8" = 1'-0"



3 NORTH ELEVATION
FACING 42ND
1/8" = 1'-0"



1 EAST ELEVATION
1/8" = 1'-0"



2 SOUTH ELEVATION
1/8" = 1'-0"

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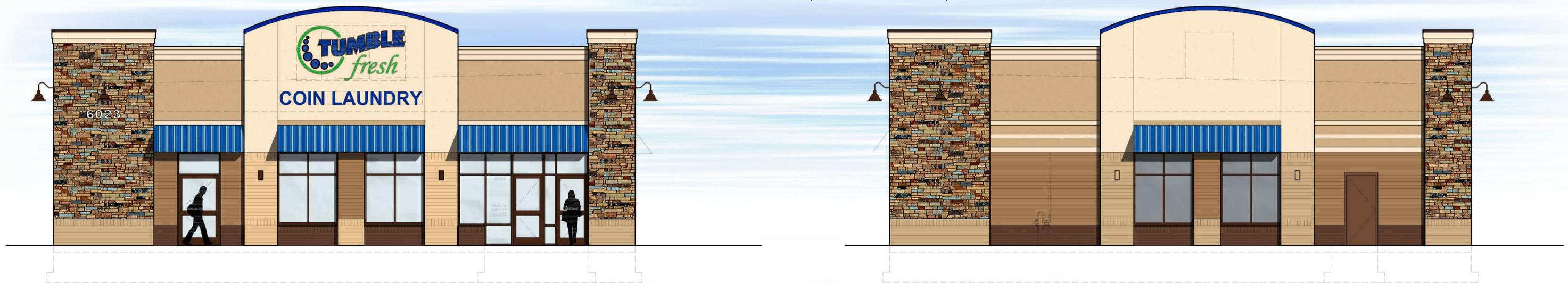
TUMBLE FRESH COIN LAUNDRY
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EXTERIOR ELEVATIONS
SCALE: 1/8" = 1'-0" @ 22X34
1/16" = 1'-0" @ 11X17

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A3.1



WEST EXTERIOR ELEVATION (FACING BRUNSWICK)



NORTH EXTERIOR ELEVATION (FACING 42ND AVE N)

SOUTH EXTERIOR ELEVATION



EAST EXTERIOR ELEVATION

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TUMBLE FRESH COIN LAUNDRY
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EXTERIOR RENDERING
 SCALE: 1" = 10'-0"

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A3.2