HUXLEY
HEART OF THE PRAIRIE

PLANNING & ZONING COMMISSION MEETING

HUXLEY CITY HALL – COUNCIL CHAMBERS – 515 N. MAIN AVENUE
MONDAY MARCH 16, 2020
6:00 P.M.

AGENDA

1. **Roll Call**
2. **Motion to approve the minutes from September 12, 2019**
3. **Public Comments (5-minute limit for items not on this agenda)**
4. **Business Items**
    a. **Site Plan review DSI Huxley, Huxley Industrial Park**
5. **Informational Items**
    a. **2019 Comprehensive Plan Update**
    b. **FY 20/21 Operating Budget and Capital Improvement Program (CIP)**
    c. **Trails and Sidewalk Infill Draft Master Plan**
    d. **Commercial and Residential Zoning Districts Alcohol Sales**
6. **City Administrator Communications**
7. **Planning and Zoning Commission Comments**
8. **Adjournment**

For more information on this and other agenda items, please call the City Clerk's Office at 515-597-2561 or visit the Clerk's Office, City Administration Building at 515 N. Main Ave. Agendas are available to the public at the City Clerk's Office on Friday morning preceding Monday's Planning & Zoning Commission meeting. Citizens can also request to receive meeting notices and agendas by email by calling the Clerk's Office or sending their request via email.

Planning and Zoning Commission Minutes

September 12, 2019
Council Chambers
7:30 A.M.

HUXLEY
HEART OF THE PRAIRIE

1.0) CALL TO ORDER AND ROLL CALL:

Chairman Roger Bierbaum called the P&Z Meeting to order at 7:31 AM. P&Z members present:

Roger Bierbaum	☑	Larry Wilson	☐
Cheryl Patterson	☑	Joe Scott	☐
Mike Schonhorst	☐	Nate Easter	☑
Gordon Mosher	☑		

Staff present: John Haldeman-Zoning Administrator
Amy Kaplan-Zoning Clerk

Consultants present: None

Guests present: None

COMMISSION AGENDA ITEMS:

2.0) MOTION TO APPROVE THE MINUTES FROM THE FOLLOWING MEETING:

2.1) JULY 29,2019 REGULAR MEETING - Motion by Mosher and seconded by Easter to approve minutes. Roll was taken. 4 AYE. 0 NAY.

3.0) PUBLIC HEARING: None

4.0) DISCUSSION AND RECOMMENDATION ITEMS:

4.01) DISCUSSION AND POSSIBLE COMMENTS ON URBAN RENEWAL AMENDMENT FOR KUM AND GO PROJECT:

John explained to the commission that the Kum and Go project meets the criteria of an Urban Renewal Area. Brief discussion took place. Motion by Easter, seconded by Patterson to recommend approval to City Council. Roll was taken. 4 AYE. 0 NAY.

5.0) MISCELLANEOUS COMMENTS:

- John Haldeman announced his retirement in December 2019.
- Sidewalks: The City is requiring sidewalks to be installed. Waivers will no longer be issued.

- Bierbaum inquired about the 2020 Census and what would be different if the population of Huxley was over 5,000 people. John indicated that additional water and sewer reporting would have to be done and that more grant opportunities would be available.
- Mosher asked Haldeman if he was interested in being on the Planning & Zoning Commission once he retires. John indicated that he would consider being a member.

6.0) ADJOURNMENT – Motion by Mosher to adjourn at 7:41 AM, seconded by Easter. 4 AYE. 0 NAY.

_____
Amy Kaplan, Zoning Clerk

_____ _____
Roger Bierbaum, Chairman Date of Approval

Staff Report

PLANNING & ZONING COMMISSION COMMUNICATION

AGENDA HEADING:

DSI Huxley Site Plan, Huxley Development Park

SYNOPSIS:

DSI Properties Iowa, LLC (Diamond Surface Inc, 15292 40th Avenue North, Plymouth MN 55446) has submitted materials for City of Huxley review for the construction of a 7,716 SF single story warehouse/office space at the intersection of Campus Drive and S. Main Ave. The project will add new taxable valuation, investment and activity to the Huxley Development Park. Project initiation is estimated for Spring 2020 and completion by Fall/Winter 2020.

Additional information is below and in the attachments.

ADDITIONAL INFORMATION:

- Staff has worked with Veenstra & Kimm, Inc. to review the submitted materials
- Comments were provided to Shive Hattery Wednesday March 11, 2020
- Correspondence has been received from Shive Hattery in response to the comments and has been reviewed by staff and V & K,
- Staff is recommending conditional approval of the DSI site plan based on receipt of an updated submittal that reflects the responses to comments letter.

ANTICIPATED ACTIONS AND FUTURE COMMITMENTS:

- March 24, 2020 City Council review of Planning & Zoning Commission recommendation
- Issuance of building permit, construction of the project, and issuance of occupancy permit.

Site Plan

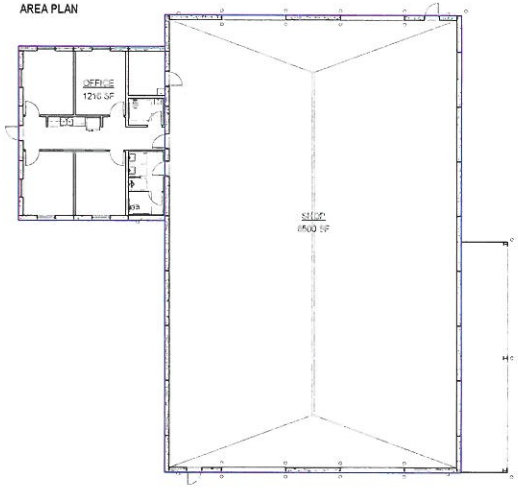
DIAMOND SURFACE SHOP & OFFICE BUILDING

HUXLEY, IOWA 50124

CODE SUMMARY

DSI-HUXLEY CODE SUMMARY				last updated	01/19/20
Code Referenced	2015 International Building Code [2015 IBC]				
Use & Occupancy Classification [Chapter 3]					
Occupancies	Use	Area		Section	
Repair Shop	F1	6,500 sf		306.2	
Office	B	1,216 sf		304	
Total Building		7,716 sf			
Special Detailed Requirements based on used and occupancy [Chapter 4]					NONE REQUIRED
Allowable Height & Area [Chap 5]	Const. Type	Height (ft)	Stories	Allowable	
F1 (most restrictive)	V-B (1-h)	55	2	8,500 sf	COMPLIES
NO SPRINKLERS		Table 5	Table 5	Table 506.2 (limited)	
Mezzanines & Equipment Platforms [S 505]	no mezzanine planned for this building at this				NA
Mixed Use & Occupancy [Section 508]					
Separation of occupancies [S 508.3.4]	1-hr construction required between horticulture occupancies and the main occupancy				COMPLIES
Separation of Occupancies [Table 508.4]	separation between B & F-1				NONE REQUIRED
Incidental Uses [Section 509]	Table 509				NA
Type of Construction [Chapter 6]	Type V-B				
Fire Resistance Rating: [Table 601]	0				
Bearing Walls Interior	0				COMPLIES
Partitioning Walls Interior	0				COMPLIES
Floor Construction & Secondary Struct	0				COMPLIES
Roof Construction & Secondary Struct	0				COMPLIES
Fire & Smoke Protection Features [Chapter 7]					
None Required					NA
Automatic Sprinkler [Section 903.2.9]	none				NA
Portable Fire Extinguishers [Section 906.1]	fire extinguisher required				COMPLIES
Fire Extinguishers [Table 906.3(1)]	locations rating		3A		COMPLIES
	max. floor area per extinguisher		3,000 sf		COMPLIES
	max. floor area per extinguisher		11,250 sf		COMPLIES
	max. travel distance		75 ft		COMPLIES
Fire Alarm & Detection [Section 907.2]	not required				NA
Occupant Load [Table 1004.1.2]			Calculated		
Classification	SF	OL	Occupants		
Repair Shop	6,500	100	65		
Office	1,216	100	12		
Total	7,716		77		
Minimum Egress Width [Section 1005]	Factor	Req'd/Provided			
1005.3.1 Other	0.2	15	16	inches	COMPLIES
Fire Exit Hardware [Section 1008]					
5.1008.1.9.2 Exit Doors	dome door swing in direction of				COMPLIES
5.1008.1.9.3 Hardware	hardware shall not require tight grasping, pinch				COMPLIES
5.1008.1.10 Panic & Fire Exit Hardware	panic hardware not required for general				COMPLIES
	required for electrical rooms with equipment or				COMPLIES
Min. Number of Exits [Section 1015]	2	required per floor min			COMPLIES
	3	provided			COMPLIES
Separation of Exits [Section 1015.2]	exits to be separated 1/2 diagonal distance min (room operator)				COMPLIES
5.1015.2.1 Three or more exits	where more than one exit is required, two shall				COMPLIES
Exit Access Travel Dist. [Table 1016.1]	F1	occupancy	150	ft max.	COMPLIES
		with sprinkler system			
Accessibility [Chapter 11]	in accordance with IBC 2012 and ICC/ANSI A117.1				COMPLIES
5.1103	2	accessible toilet rooms required			COMPLIES
	3	provided			COMPLIES
Plumbing Fixtures [2012 IPC]					
Plumbing Fixtures shall be scheduled and provided for each tenant requirement and not part of					
Minimum Fixtures may be provided to follow for single area based on S occupancy requirements					
Criteria for Occupancies					
Toilets/Urinals	1/100				
Lavatories	1/100				
Required Number of Fixtures	M	F	Total		
Occupancy	35	30	65		
Toilets/Urinals	0.35	0.30			
Lavatories	0.35	0.30			
Criteria for F occupancies					
Toilets/Urinals	1/100				
Lavatories	1/100				
Required Number of Fixtures	M	F	Total		
Occupants	6	6	12		
Toilets/Urinals	0.06	0.06			
Lavatories	0.06	0.06			
Total Required Fixtures					
Toilets/Urinals	1.00	1.00			
Lavatories	1.00	1.00			
Provided Number of Fixtures					
Toilets/Urinals	2	1			
Lavatories	3	1			

AREA PLAN



PROJECT TEAM

OWNER:
DIAMOND SURFACE INC

GENERAL CONTRACTOR
HENNING COMPANIES LLC

JURISDICTION:
CITY OF HUXLEY

ARCHITECTURAL DESIGN:
RAINS ARCHITECTURE, PLLC

CIVIL ENGINEERING:
SHIVE HATTERY

STRUCTURAL ENGINEERING:
RAKER RHODES ENGINEERING, LLC

LICENSED PROFESSIONAL ARCHITECT
JEFFREY L. RAINS
07436
IOWA

I HEREBY CERTIFY THAT THE REPORT OR THE TECHNICAL DOCUMENTS CONTAINED HEREIN WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA.

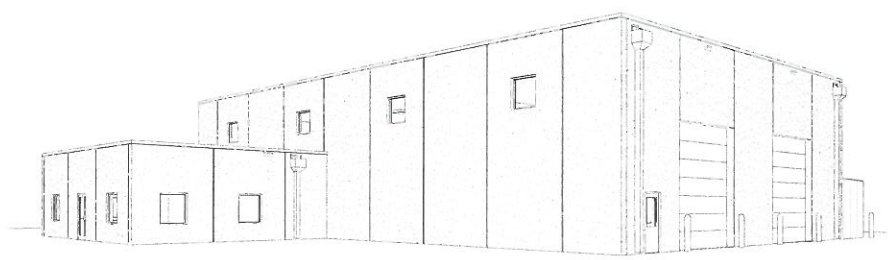
Jeff Rains
2020.02.16
16:00:50-06'00'

JEFFREY L. RAINS [PRINTED OR TYPED NAME]
DATE
E-MAIL ADDRESS
PAGES OR SHEETS COVERED BY THIS SEAL: G1, A1-A4

VICINITY MAP

GENERAL NOTES

1. THESE DRAWINGS AND THE DETAILS THEREIN REPRESENT THE PROPERTY OF RAILS ARCHITECTURE PLLC. THEY ARE LOANED TO THE OWNER FOR THE USE IN THE PERFORMANCE OF THE WORK. THEY MAY NOT BE REPRODUCED OR SHARED WITHOUT THE WRITTEN CONSENT OF RAILS ARCHITECTURE PLLC.
2. ALL DIMENSIONS & DETAILS SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.
3. MECHANICAL, ELECTRICAL, PLUMBING, SPRINKLER SYSTEMS TO BE DESIGNED AND SPECIFIED BY OTHER DISCIPLINES FOR PURPOSES OF CONSTRUCTION. THEY ARE NOT PART OF THIS DRAWING SET.
4. BEFORE PROCEEDING WITH THE WORK, CONTRACTOR SHALL OBTAIN ALL LICENSES, PERMITS, CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, LAWS, ORDINANCES, RULES, REGULATIONS, REQUIREMENTS OF ALL PUBLIC AND PRIVATE AUTHORITIES HAVING JURISDICTION OVER THE WORK OR OTHERWISE REQUIRED BY LAW.
5. THESE DRAWINGS REPRESENT THE OVERALL DESIGN INTENT AT THE TIME OF CONTRACT COMPLETION. THE INTENT OF THE DRAWINGS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER, SOUND AND COMPETENT CONSTRUCTION OF THE WORK. THEY DO NOT REPRESENT THE MEANS & METHODS OF CONSTRUCTION. MEANS & METHODS OF CONSTRUCTION ARE TO BE THE SOLE RESPONSIBILITY OF THE SELF EMPLOYED CONTRACTOR.
6. THE CONTRACTOR SHALL OBTAIN A COPY OF, UNDERSTAND AND CONSTRUCT ON SAFETY PROCEDURES. THE CONTRACTOR SHALL INFORM ALL SUBCONTRACTORS OF SAFETY AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH SAFETY STANDARDS SUCH AS OSHA, ETC.
7. WHEN CONSTRUCTION PLANS ARE ALL UNDER TRANSPORTATION, MATERIAL TAXES, WORKER'S INJURY, LIABILITY, PROPERTY DAMAGE, INSURANCE, ETC. ARE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL ASSUME THE COMPLETE RESPONSIBILITY FOR THE CONSTRUCTION PLANS AND THE PLANS, DOCUMENTS OR SPECIFICATIONS SUBMITTED AND PREPARED BY THE ARCHITECT ARE APPROVED BY THE OWNER.
8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO PREPARATION AND PROCEEDING WITH THE WORK. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY ERRORS, OMISSIONS OR DISCREPANCIES.
9. DRAWINGS ARE NOT INTENDED TO DESCRIBE EVERYTHING BUT OF OTHER WORK REQUIRED IN ORDER FOR THE CONTRACTOR TO COMPLETE THE WORK. CONTRACTOR SHALL PROVIDE ALL OTHER WORK REQUIRED FOR COMPLETION OF THE WORK. DRAWINGS ARE INTENDED ONLY AS A DRAWING, CORRECT TO THE EXTENT THAT THEY ARE TRUE TO SCALE.
10. REPAIR & REPLACE ALL MATERIALS DAMAGED DURING THE COURSE OF WORK, ACCEPTABLE TO THE SATISFACTION OF THE OWNER. REPAIR & REPLACE ALL ELECTRICAL, PLUMBING, HVAC, ETC. PRIOR TO THE COMPLETION OF THE WORK TO THE SATISFACTION OF THE OWNER.
11. ALL WORK SHALL BE DONE QUALITY AND ALL MATERIALS AND EQUIPMENT SHALL BE NEW, UNDAMAGED, FRESH, STABLE, FREE FROM DEFECTS, OF THE VERY FINEST KIND OF THEIR RESPECTIVE KINDS, CONSTRUCTED IN A GOOD AND WORKMANLIKE MANNER, AND PROVIDED IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADES.
12. ALL PERSONS SHALL FOLLOW ED RULES, REGULATIONS OF PROPERTY OWNER AND AUTHORIZED PARKING WILL BE ONLY DESIGNATED AREAS.
13. CONTRACTOR SHALL ALL OTHER RELATED EQUIPMENT, SUPPLIES, EQUIPMENT, SUPPORT BUILDING OR OTHER AUTHORIZED CONTRACTORS, OR UNDERTAKING, UNDERTAKING OR CONDITIONS.
14. PROVIDE PROPER CLEANING OF SURFACE AFTER WORK. REMOVE ALL OF ALL BUILDING WITHOUT REPORTS OR OF ALL ABOVE TO BE OUT OF ALL SURFACE.
15. SUBMITTALS OF THE DRAWINGS, PRODUCT DATA AND SAMPLES, THE OWNER, ALL CONTRACTORS & SUBCONTRACTOR HAS REVIEWED AND APPROVED THEM. REVIEW OF SUBMITTALS BY THE OWNER, ALL CONTRACTOR & SUBCONTRACTOR HAS REVIEWED ALL SUBMITTAL PRIOR TO THE SUBMISSION TO THE ARCHITECT.
16. CONTRACTOR SHALL PROVIDE ALL OF ALL MATERIAL, UP TO 10 FEET OF STRUCTURE, ETC.



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A3 INTERIOR ELEVATIONS, SCHEDULES
A4 SECTIONS & DETAILS

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S0.2 STRUCTURAL NOTES
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S3.1 ROOF FRAMING PLANS
S3.2 OH CRANE FRAMING
S4.1 FRAMING DETAILS

MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS SHALL BE SUBMITTED UNDER SEPARATE COVER.

DSI Shop & Office
S Main Street
Huxley, IA

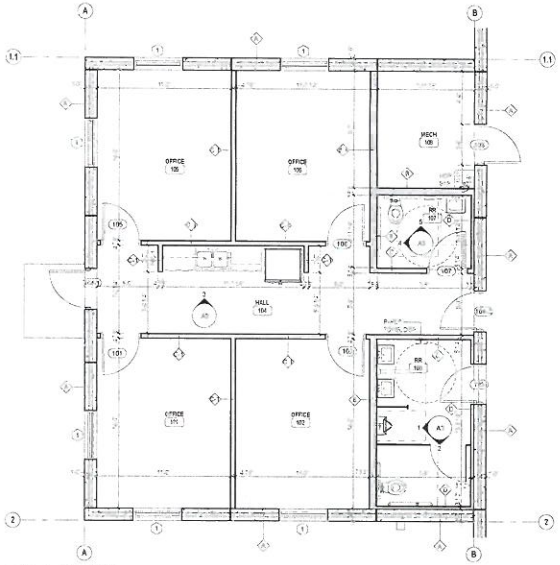
Diamond Surface Inc.

Revisions	

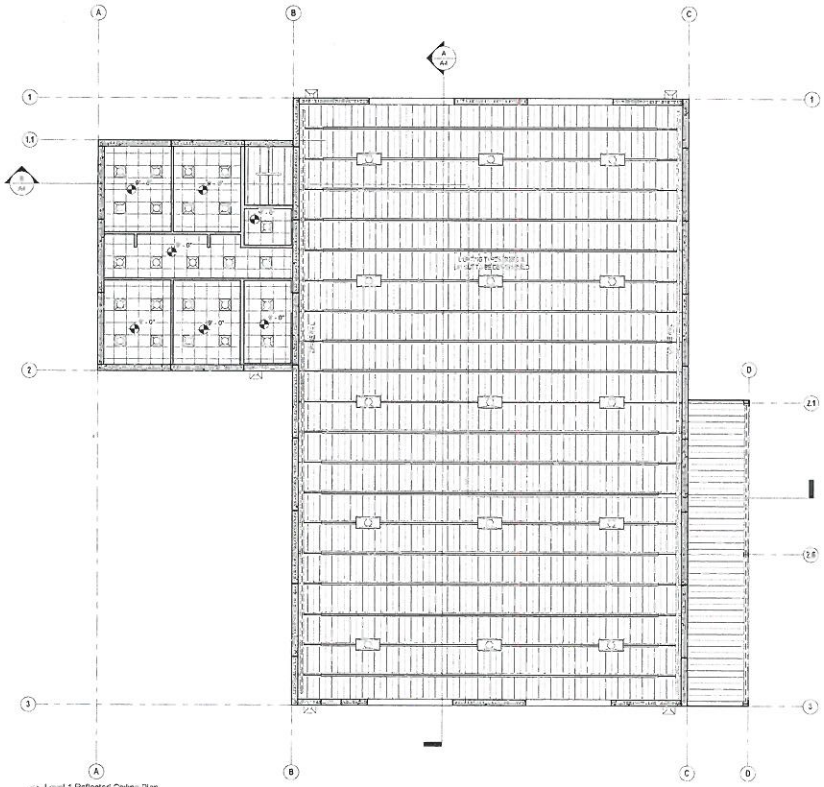
ISSUE 12.31.19 PROJ. RA-19032
COVER SHEET, CODE SUMMARY

2020-02-16 -- FOR PERMIT & CONSTRUCTION

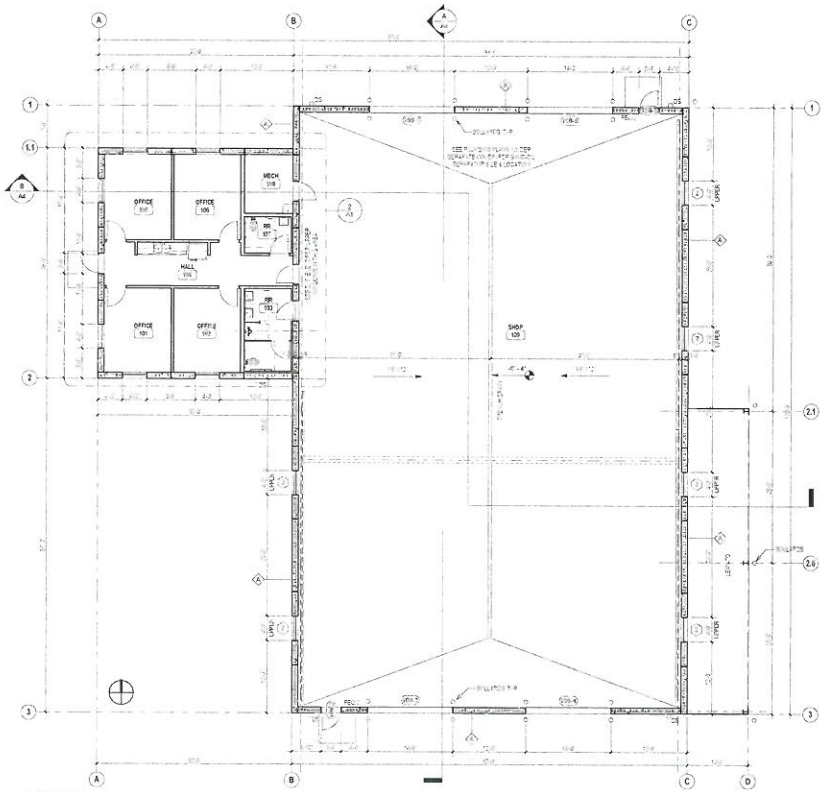
G1



2 Level 1 - Enlarged Office
1/8" = 1'-0"



1 Level 1-Reflected Ceiling Plan
1/8" = 1'-0"



1 Floor Plan
1/8" = 1'-0"

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Diamond Surface Inc.

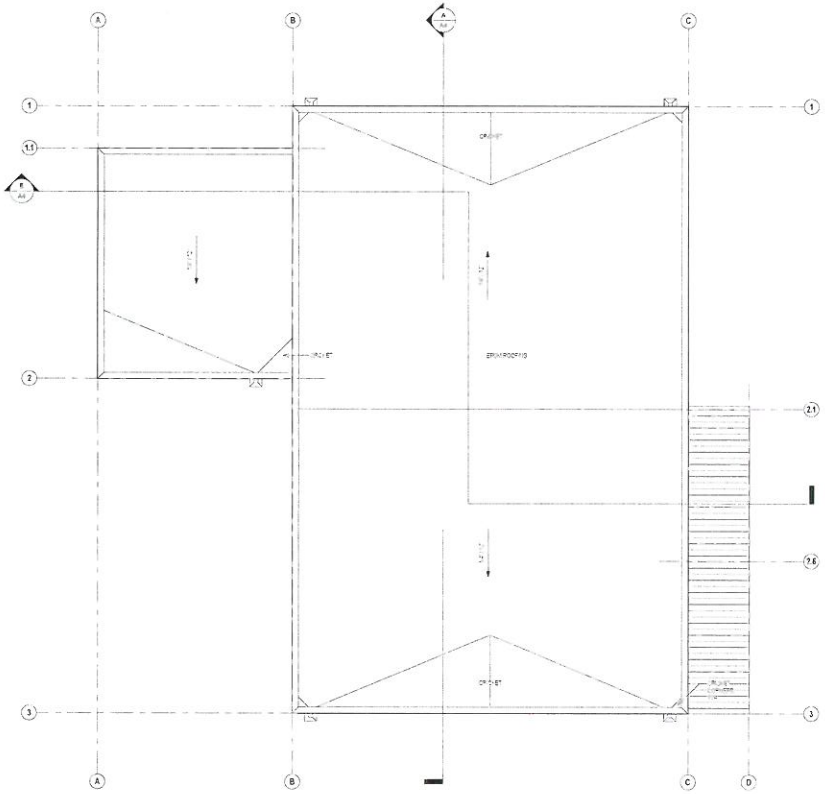
Revisions	

ISSUE 12 09 19 PROJ. RA-19022

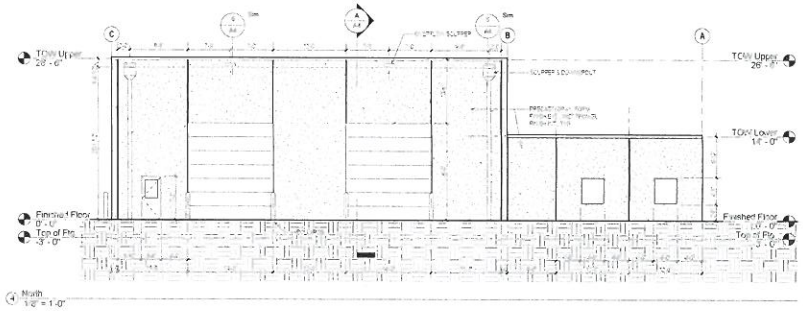
FLOOR PLANS

2020-02-16 -- FOR PERMIT & CONSTRUCTION

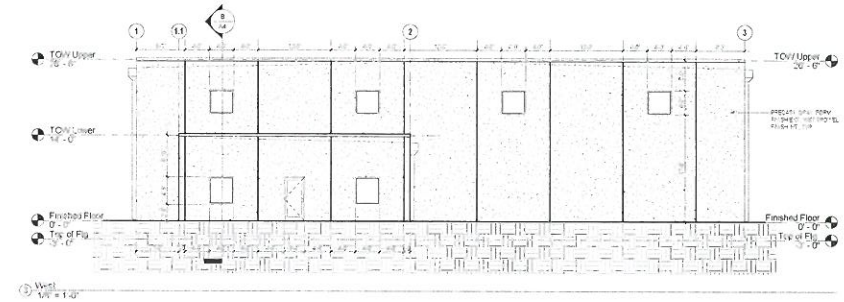
A1



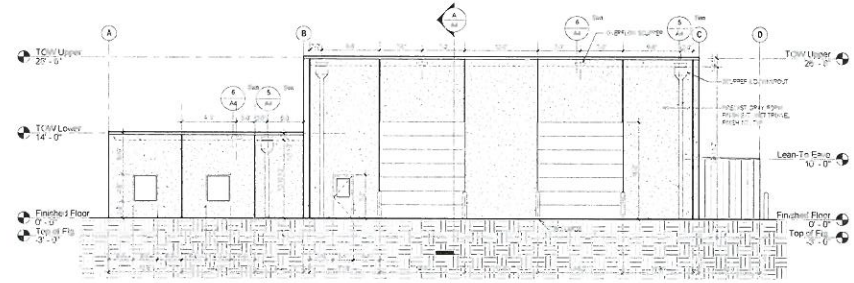
Roof Plan
1/8" = 1'-0"



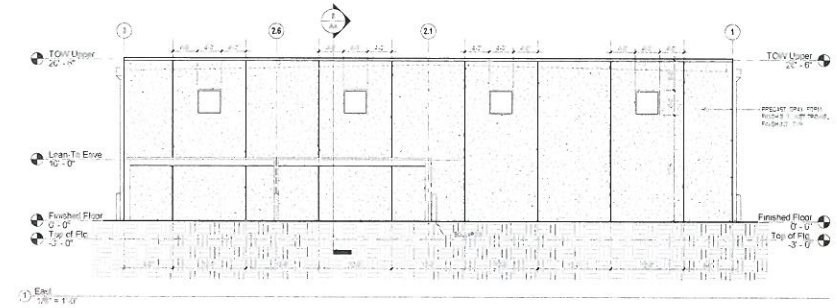
North
1/8" = 1'-0"



West
1/8" = 1'-0"



South
1/8" = 1'-0"



East
1/8" = 1'-0"

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Diamond Surface Inc.

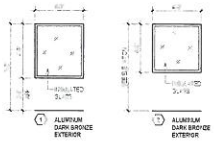
Revisions	

ISSUE 01/16/20 PROJ. RA-19032

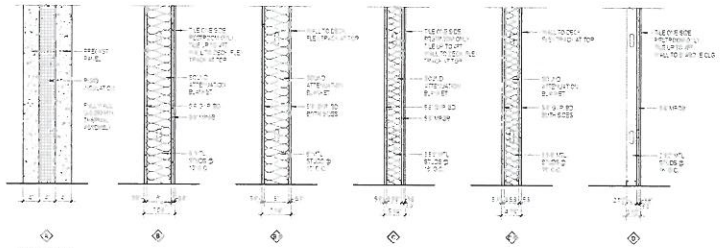
EXTERIOR ELEVATIONS & ROOF PLAN

2020-02-16 -- FOR PERMIT & CONSTRUCTION

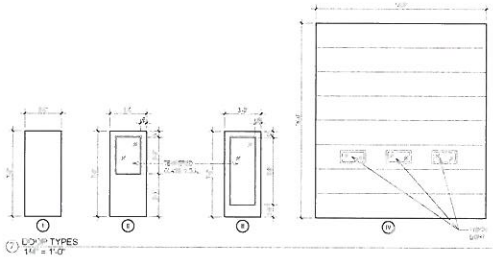
A2



WINDOW TYPES
1/8" = 1'-0"



WALL TYPES
1" = 1'-0"



DOOR TYPES
1/8" = 1'-0"

DOOR FRAME TYPES
1/8" = 1'-0"

DOOR SCHEDULE

NUMBER	LEAF	TYPE	DOOR WIDTH	DOOR HEIGHT	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FIRE RATING	HARDWARE GROUP	COMMENTS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DETAIL PROFILE
[illegible]

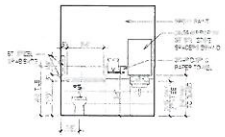
ROOM/FINISH SCHEDULE

NO.	NAME	FLOOR MATERIAL	BASE MATERIAL	WALLS NORTH WALL MATERIAL	NORTH WALL FINISH	SOUTH WALL MATERIAL	SOUTH WALL FINISH	EAST WALL MATERIAL	EAST WALL FINISH	WEST WALL MATERIAL	WEST WALL FINISH	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT	COMMENTS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

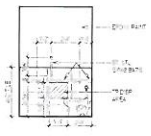
FINISHES - VERIFY W/ OWNER
[illegible]

BATHROOM ACCESSORIES - VERIFY W/ OWNER
[illegible]

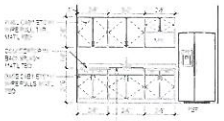
FIRE EXTINGUISHER CABINETS
[illegible]



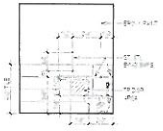
RR 107 - NORTH
1/8" = 1'-0"



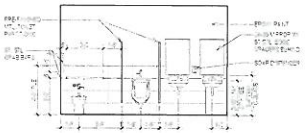
RR 107 - WEST
1/8" = 1'-0"



HALL 104
1/8" = 1'-0"



RR 103 - SOUTH
1/8" = 1'-0"



RR 103 - WEST
1/8" = 1'-0"

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Diamond Surface Inc.

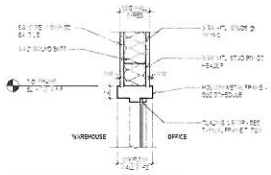
Revisions	

ISSUE 01.13.20 PROJ. RA-19032

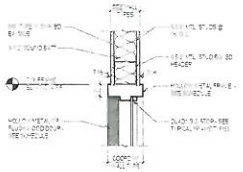
INTERIOR ELEVATIONS, SCHEDULES

2020-02-16 -- FOR PERMIT & CONSTRUCTION

A3



12 H.M. FRAME HEAD @ MTL. STUD WALL
1 1/2" = 1'-0"



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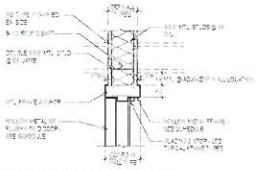
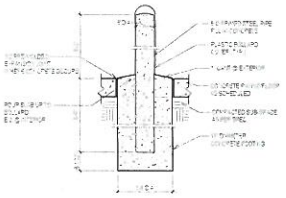
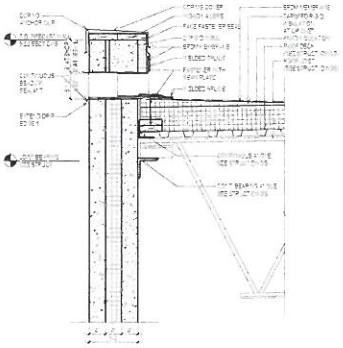
1 1/2" = 1'-0"



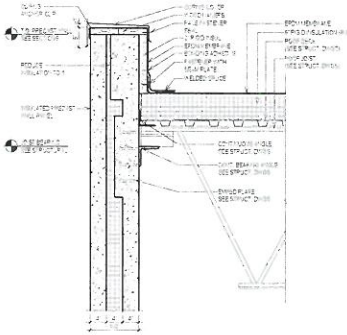
14 H.M. FRAME JAMB @ MTL. STUD WALL
1 1/2" = 1'-0"



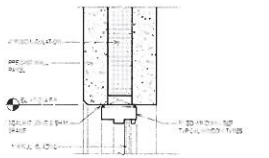
4 PIPE BOLLARD DETAIL
3/4" = 1'-0"



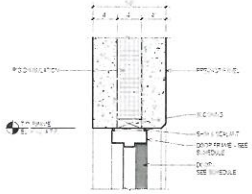
6 OVERFLOW SCUPPER DETAIL
1" = 1'-0"



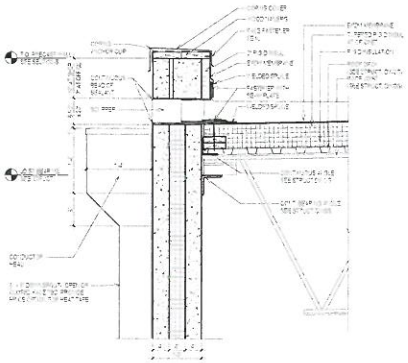
1 WMU PARAPET
1" = 1'-0"



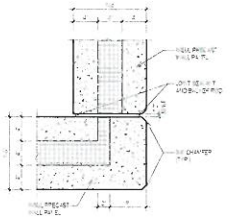
11 WINDOW HEAD @ PRECAST WALL
1 1/2" = 1'-0"



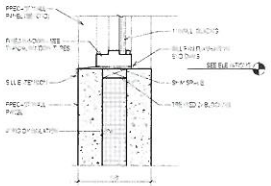
9 H.M. FRAME HEAD @ PRECAST WALL
1 1/2" = 1'-0"



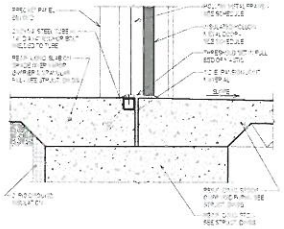
5 SCUPPER DETAIL
1" = 1'-0"



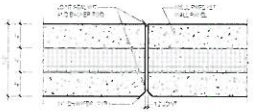
2 PRECAST PANEL CORNER DETAIL
1 1/2" = 1'-0"



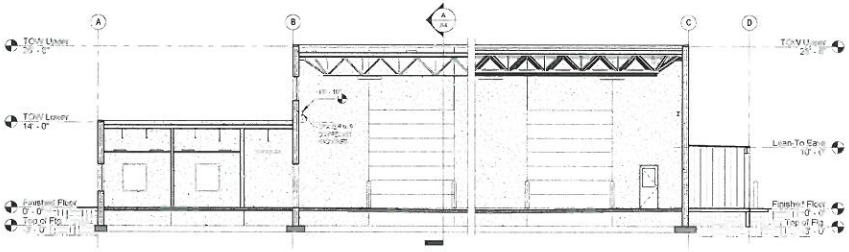
12 WINDOW SILL @ PRECAST WALL
1 1/2" = 1'-0"



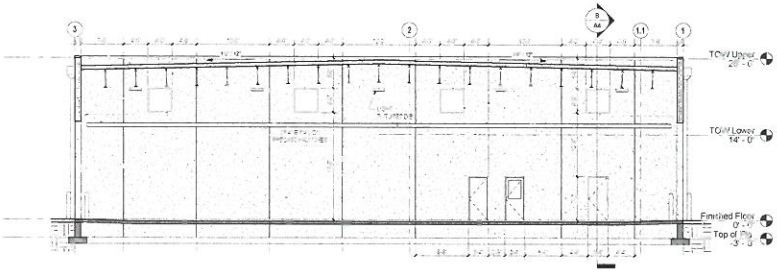
8 H.M. FRAME SILL @ PRECAST WALL
1 1/2" = 1'-0"



3 PRECAST PANEL JOINT DETAIL
1 1/2" = 1'-0"



B Section B
1/8" = 1'-0"



A Section A
1/8" = 1'-0"

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Huxley, IA

Diamond Surface Inc.

Revisions	

ISSUE 01.28.20 PROJ. RA-19032
SECTIONS & DETAILS

2020-02-16 -- FOR PERMIT & CONSTRUCTION

A4

GN GENERAL INFORMATION
GN1 STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE DRAWINGS FROM THESE DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.

GN2 VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO FABRICATION OF ANY ITEMS.

GN3 DRAWINGS SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL OPENINGS, ELECTRICAL CONDUITS, PLUMBING DEPRESSIONS, ETC. NOT SHOWN ON DRAWINGS. COORDINATE LOCATION, SIZE AND REINFORCEMENT OF ALL OPENINGS WITH ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.

GN4 THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. IN CASES WHERE THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS, NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS WHERE NO DETAILS ARE PROVIDED. CONSTRUCTION SHALL REFLECT SIMILAR OR SIMILAR WORK.

GN5 THE BUILDING IS NOT STRUCTURALLY STABLE UNTIL ALL CONNECTIONS, FRAMING, ROOF AND FLOOR DIAPHRAGMS AND EXTERIOR WALLS ARE COMPLETE AND HAVE ACHIEVED FINAL DESIGN STRENGTH. CONTRACTOR IS SOLELY RESPONSIBLE TO MAINTAIN SITE CRITICAL STABILITY DURING ERECTION AND CONSTRUCTION. TEMPORARY BRACING SYSTEMS ARE NOT TO BE REMOVED UNTIL STRUCTURAL WORK IS COMPLETE.

GN6 CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECEIVED AND DIVERSION THE EFFECTS OF THERMAL MOVEMENT OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

GN7 RETAINING WALLS NOT BACKFILLED WITHIN 72 HOURS OF THEIR PLACEMENT SHALL NOT BE BACKFILLED UNTIL THE SPECIFIED COMPACTED FULL DESIGN STRENGTH, UNLESS ADEQUATE BRACING IS PROVIDED AT THE TOP OF THE WALL.

DP DESIGN PARAMETERS
DP1 THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE (IBC) EDITION

DP2 UNIFORM LIVE LOADS
TYPICAL ROOF SNOW LOAD (Pg) 25 PSF+DRIFT
DRIFT LOAD AS SHOWN ON PLAN

DP3 CONCENTRATED LIVE LOADS
TYPICAL OFFICE (OVER 2 FT x 2.5 FT) 2000 LB
TYPICAL STAIRS (OVER 2.5 x 2.5) 300 LB

DP4 GROUND SNOW PARAMETERS
GROUND SNOW LOAD (Pg) 25 PSF
FLAT ROOF SNOW LOAD (Pf) 25 PSF
SNOW EXPOSURE FACTOR (Ce) 1.0
SNOW LOAD IMPORTANCE FACTOR (I) 1.0
SNOW LOAD THERMAL FACTOR (Ct) 1.0

DP5 EARTHQUAKE DESIGN PARAMETERS
SEISMIC IMPORTANCE FACTOR (Ie) 1.0
Ss 0.09g
S1 0.04g
SEISMIC SITE CLASS E
Sds 0.07g
Sd1 0.12g
SHORT-PERIOD SITE COEFFICIENT (Fa) 2.5
LONG-PERIOD SITE COEFFICIENT (Fv) 3.5
SEISMIC DESIGN CATEGORY B
SEISMIC FORCE RESISTING SYSTEM ORDINARY PLYWOOD SHEAR WALLS
SEISMIC BASE SHEAR (Vs) 49.2 K
SEISMIC BASE SHEAR (Vd) 48.3 K
SEISMIC RESPONSE COEFFICIENT (Cs) N/A
SEISMIC RESPONSE COEFFICIENT (Cs) 0.004
RESPONSE MODIFICATION FACTOR (R) 3
DEFLECTION MODIFICATION FACTOR (Cd) 3
REDUNDANCY FACTOR (ρ) 1.0
REDUNDANCY FACTOR (ρ) 1.0
SEISMIC ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE ANALYSIS

DP6 WIND DESIGN PARAMETERS
BASIC WIND SPEED (V) 3 (SECOND GUST) 115 MPH
RISK CATEGORY II
WIND EXPOSURE CATEGORY B
INTERNAL PRESSURE COEFFICIENT +0.18
BASIC DESIGN PRESSURE (P) 20 PSF (SERVICE)
NET WIND UPLIFT @ ROOF 10 PSF (SERVICE)

DP7 ALLOWABLE SHELL DEFLECTIONS
EXCEPTIONAL SUBSTANTIAL DETAIL (SERVICE WIND DESIGN) L/240 x 0.7
INTERIOR L/360

DP8 ALLOWABLE FRAMING DEFLECTIONS
ROOF LIVE LOAD L/360
ROOF TOTAL LOAD L/240
FLOOR LIVE LOAD L/360
FLOOR TOTAL LOAD L/240

DP9 ASSUMED FUTURE CONSTRUCTION
VERTICAL 40 MPH
HORIZONTAL ADDITIONAL 40 MPH BUILDING TO THE EAST

FP FOUNDATION PARAMETERS
FP1 SITE AND BOTTOM ELEVATIONS OF FOOTINGS MUST BE FINALIZED BASED ON THE FINAL REPORT FILE NO. 1-4-2-1215 THEREAFTER BY BRADY INTERTECH AND SHITTS BROCKLAN EXCAVATION AND DEPOSITS MUST BE REVIEWED AND ACCEPTED BY THE ENGINEER OF RECORD FOR EVALUATION OF THEIR CHANGES

FP2 ALLOWABLE SOIL BEARING PRESSURE
CONTINUOUS FOOTING 2000 PSF
SPREAD FOOTING 2000 PSF

FP3 MINIMUM FOOTING DEPTH FOR FROST PROTECTION
(BELOW FINISHED GRADE) 42 IN

FP4 DESIGN EARTH PRESSURES
ACTIVE 35 PCF
AT REST 60 PCF
AT PASSIVE 400 PCF

FP5 GEOTECHNICAL ENGINEER IS SOLE JUDGE OF THE SUITABILITY OF THE SOIL AND MATERIAL TO BE PLACED IN THE FOOTING. BEARING MATERIAL SHALL BE APPROVED BY GEOTECHNICAL ENGINEER BEFORE FOUNDATION INSTALLATION. DO NOT PROCEED WITHOUT APPROVAL.

SU SUBMITTALS
SU1 GENERAL CONTRACTOR TO PROVIDE A COOP DRAWING SUBMITTAL TO ENGINEERS ALL PROPOSED SUBMITTALS FOR APPROVAL BY STRUCTURAL ENGINEER OF RECORD

SU2 ALL SHOP DRAWINGS SHALL BE CHECKED BY THE FABRICATOR AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER OF RECORD. SHOP DRAWINGS REVIEWED BY ENGINEER IS LIMITED TO REVIEWING GENERAL COMPONENTS TO THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES FROM THE CONTRACT DOCUMENTS. DIMENSIONS, FABRICATION, CONSTRUCTION DETAILS, OR QUANTITIES ARE NOT REVIEWED.

SU3 SHOP DRAWINGS SHALL INCLUDE CONNECTION AS WELL AS MEMBER SIZING AND GRADE OF ALL MEMBERS. PLANT AND ANY DEVIATIONS REQUIRED BY FOR DETERMINING INTERACTION DIAGRAM SHALL ALSO BE INCLUDED

SU4 IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF AN ENGINEER REGISTERED IN THE APPROPRIATE STATE AND CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD

SU SUBMITTALS (CONT.)
SU5 DESIGN DRAWINGS, SHOP DRAWINGS AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE REQUIRED BY THE PLANS AND SPECIFICATIONS INCLUDING:
- **PRECAST CONCRETE MEMBERS**
- **STEEL JOISTS**
- **METAL ROOF DECK**

SHALL BEAR THE SEAL AND SIGNATURE OF AN ENGINEER REGISTERED IN THE APPROPRIATE STATE AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION. CALCULATIONS SHALL BE PROVIDED FOR ALL COMPONENTS OF THE STRUCTURE, CONSIDERING THE ADJUSTED STRUCTURAL ELEMENTS PROVIDED BY THE CONTRACTOR LOADS.

SU7 ITEMS THAT ARE DESIGNED BY THE CONTRACTOR SHALL BE DESIGNED TO MEET THE SPECIFICATIONS, INCLUDING STRUCTURAL DESIGN, DEAD LOAD, SELF WEIGHT, ANY ADDITIONAL LOADING, PROVIDED OF PLANS AND DETAILS, SHOP DRAWS, AND ALSO WIND UPLIFT.

SU8 ITEMS THAT ARE DESIGNED BY THE CONTRACTOR SHALL INCLUDE ANY RELEVANT TECHNICAL LITERATURE FROM MANUFACTURER, ALSO PROVIDE A CERTIFICATION FROM THE MANUFACTURER THAT THE PRODUCT IS IN COMPLIANCE WITH ALL APPLICABLE CODES AND STANDARDS.

SU9 THE CONTRACTOR SHALL COORDINATE CAREFULLY REVIEWING OF MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND REQUIRED PIPING WITH THE STRUCTURE. ANY CONNECTIONS TO STRUCTURE SHALL CONFORM TO ARCHITECT-ENGINEER OF RECORD. ANY ITEMS NOT FOUND ON ENGINEER PLAN OFFERED IN THE APPROPRIATE STATE, AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION

SU10 FIELD FINISHED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM OR ADD TO THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF AN ENGINEER REGISTERED IN THE APPROPRIATE STATE AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION

SP SPECIAL INSPECTION
SP1 SPECIAL INSPECTION PROGRAM SHALL CONFORM TO CHAPTER 17 OF THE IBC

SP2 THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM THE REQUIRED TESTING AND SPECIAL INSPECTIONS. WITH QUALIFICATIONS DESCRIBED PER IBC CHAPTER 17 AND THE PROJECT SPECIFICATIONS

SP3 SPECIAL INSPECTION REPORTS SHALL BE FURNISHED TO BUILDING OFFICIAL, OWNER, ARCHITECT, STRUCTURAL ENGINEER AND CONTRACTOR

SP4 SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING THAT THE STRUCTURAL WORK HAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS

SP5 SPECIAL INSPECTION PROGRAM

VERIFICATION AND INSPECTION	FREQUENCY / TASK
STEEL	
1. INSPECTION TASKS PRIOR TO WELDING	
A. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	PERFORM
B. MANUFACTURER'S CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	PERFORM
C. MATERIAL IDENTIFICATION (STAMPING)	OBSERVE
D. WELDER IDENTIFICATION SYSTEM	OBSERVE
E. FITUP OF KP-ZONE WELDS (INCLUDING JOINT GEOMETRY)	OBSERVE
• JOINT PREPARATION	
• FIT UP (ALIGNMENT, WORK OPENING, ROOT FACE, BEVEL)	
• CLEANLINESS (CONDITION OF STEEL SURFACES)	
• TACKING (TACK WELD QUALITY & LOCATION)	
• BACKING TYPE & FIT UP (IF APPLICABLE)	
F. CONFIRMATION & FINISH OF ACCESS HOLES	OBSERVE
G. FITUP OF FILLET WELDS	OBSERVE
• FIT UP (ALIGNMENT, GAPS AT ROOT)	
• CLEANLINESS (CONDITION OF STEEL SURFACES)	
• TACKING (TACK WELD QUALITY & LOCATION)	
2. INSPECTION TASKS DURING WELDING	
A. USE OF QUALIFIED WELDERS	OBSERVE
B. CONTROL & HANDLING OF WELDING CONSUMABLES	OBSERVE
• BOX CONTROL • PACKAGING	
C. NONDESTRUCTIVE TESTING OF TACK WELDS	OBSERVE
D. ENVIRONMENTAL CONDITIONS	OBSERVE
• WIND SPEED WITHIN LIMITS • PRECIPITATION & TEMP	
E. WPS COMPLIANCE	OBSERVE
• PREHEAT OF WELDING SURF. • WRONG SPEED	
• ELECTRODE TYPE AND UNIFORMITY • PREHEAT APPLIED	
• CHECK WIRE FEED TYPE/FLOW RATE • PROPER POSITION (F, V, H, OH)	
• INTERPASS TEMP. MAINTAINED (MIN/MAX)	
F. WELDING TECHNIQUES	OBSERVE
• INTERPASS & FINAL CLEANING	
• EACH PASS WITHIN PROFILE LIMITATIONS	
• EACH PASS MEETS QUALITY REQUIREMENTS	
3. INSPECTION TASKS AFTER WELDING	
A. WELD CLEANED	OBSERVE
B. WELD LENGTH & LOCATION OF WELDS	PERFORM
C. WELD MEET VISUAL ACCEPTANCE CRITERIA	PERFORM
• CRACK PROHIBITION • WELD SIZE	
• WELD SIZE METAL FUSION • UNDERCUT	
• CRATER CROSS SECTION • POROSITY	
• WELD PROFILES	
D. ARC STRIKES	PERFORM
E. NARSA	PERFORM
F. GALVING & WIRE BRUSH REMOVED OF RESIDUE	PERFORM
G. REPAIR ACTIVITIES	PERFORM
H. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	PERFORM
4. INSPECTION TASKS PRIOR TO BOLTING	
A. MFR. CERTS. AVAILABLE FOR FASTENER MATERIALS	PERFORM
B. FASTENERS MARKED IN ACCORDANCE W/ ASTM SPECS	OBSERVE
C. SNUGGER FASTENERS SELECTED FOR THE JOINT (STRUCTURAL TYPE, SIZE, GRADE)	OBSERVE
D. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	OBSERVE
E. CONNECTED ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION & HOLE PREPARATION, IN THE OPEN, MEET APPLICABLE SPECS	OBSERVE
F. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL, PROPERLY & DOCUMENTED FOR FASTENERS ASSEMBLED & WITHOUT SPECIAL	OBSERVE
G. PROPER SUBSAFE PROVIDED FOR DIRECT, NOTE: WASHERS & OTHER FASTENER COMPONENTS	OBSERVE
5. INSPECTION TASKS DURING BOLTING	
A. FASTENER ASSEMBLIES, OR SUITABLE CONDITION, PLACED IN ALL HOLES & NEITHER LOOSE NOR TIGHT BOLTS FOUND IN ANY	OBSERVE
B. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	OBSERVE
C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	OBSERVE
D. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH RCSC SPECIFICATION, PROCEEDING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	OBSERVE
6. INSPECTION TASKS AFTER BOLTING	
A. DISCREPANCY AND EPTANCE OR REJECTION OF BOLTED JOINTS	PERFORM
7. INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL	
A. MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK	
1) IDENTIFICATION MARKING TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	PERIODIC
2) MANUFACTURER'S CERTIFIED TEST REPORTS	PERIODIC
B. INSPECTION OF WELDING	
1) FILLER & PROFILE WELDS	PERIODIC

SP SPECIAL INSPECTION (CONT.)

VERIFICATION AND INSPECTION	FREQUENCY / TASK
CONCRETE	
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, & PLACEMENT	PERIODIC
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE W/ IBC TABLE 1705.3 ITEM 2b	———
3. INSPECTION OF ANCHORS TO BE INSTALLED IN CONCRETE WHERE ALLOWABLE LOAD HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED	PERIODIC
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS	PERIODIC
5. VERIFY MIX DESIGN AND REQUIRED DURABILITY	PERIODIC
6. AT THE TIME FRESH CONCRETE IS CHARGED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP & AIR CONTENT TESTS, & DETERMINE THE TEMPERATURE OF THE CONCRETE	CONT
7. INSPECTION OF CONCRETE & SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	CONT
8. INSPECTION OF MAINTENANCE OF SPECIFIED CURING TEMP. & TECHNIQUES	PERIODIC
9. ERECTION OF PRECAST CONCRETE MEMBERS	PERIODIC
10. VERIFICATION OF IN SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE & PRIOR TO REMOVAL OF SHORES & FORMS FROM BEAMS & STRUCTURAL SLABS	PERIODIC
11. VERIFY FORMWORK FOR SHAPE, LOCATION & DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	PERIODIC
TOILS	
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	PERIODIC
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH & HAVE REACHED PROPER MATERIAL	PERIODIC
3. PERFORM EXCAVATION & TESTING OF COMPACTED FILL MATERIALS	PERIODIC
4. VERIFY USE OF PROPER MATERIALS, DENSITIES & LIFT THICKNESS DURING PLACEMENT & COMPACTION OF COMPACTED FILL	CONT
5. PRIOR TO PLACEMENT OF REINFORCED FILL, INSPECT SUBGRADE & VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	PERIODIC

TYPICAL STRUCTURAL ABBREVIATIONS
(PERIODS W/ ABBREVIATIONS, MAY BE WRITTEN WITHOUT SPACE AND MEANING)

&	AND	LLV	LONG LEG VERTICAL
@	AT	LP	LOW POINT
AB	ANCHOR BOLT	LB	POUND
ACI	AMERICAN CONCRETE INSTITUTE	LSH	LONG SIDE HORIZONTAL
AISC	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LSV	LONG SIDE VERTICAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MAX	MAXIMUM
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MECH	MECHANICAL, ELECTRICAL PLUMBING
AND	ADDENDUM	MSJC	MASONRY STANDARDS JOINT COMMITTEE
APPL	APPLICATION	MAX	MAXIMUM
ALT	ALTERNATE	MFR	MANUFACTURER
ARCH	ARCHITECTURAL	MIN	MINIMUM
BOT	BOTTOM	MISC	MISCELLANEOUS
BLDG	BUILDING	MIL	MILLS
BRG	BEARING	NDS	NATIONAL DESIGN SPECIFICATION
CIP	CAST IN PLACE	NTC	NOT IN CONTRACT
CJ	CONSTRUCTION JOINT	NTS	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	OC	ON CENTER
CP	COMPLETE PENETRATION	OSHA	OCCUPATIONAL SAFETY HEALTH ADMINISTRATION
CL	CENTERLINE	OPG	OPENING
CLR	CLEAR	OPP	OPPOSITE
CONC	CONCRETE	PCI	PRECAST/PRESTRESSED CONCRETE INSTITUTE
CONN	CONNECTION	PT	PARTIAL PENETRATION
CONST	CONSTRUCTION	PT	POUNDS PER SQUARE INCH
CONT	CONTINUOUS	PSF	POUNDS PER SQUARE FOOT
CONTR	CONTRACTOR	PLF	POUNDS PER LINEAR FOOT
DBA	DEFORMED BAR ANCHOR	PL	PLATE
DL	DEAD LOAD	PLBG	PLUMBING
DET	DETAIL	PL	PLATE
DIA or Ø	DIAMETER	RB	REBAR
DIAG	DIAGONAL	REF	REFERENCE
DIM	DIMENSION	REINF	REINFORCING
DN	DOWN	REQD	REQUIRED
DWGS	DRAWINGS	REV	REVISION
EF	EACH FACE	SDI	STEEL DECK INSTITUTE
EJ	EXPANSION JOINT	SJI	STEEL JOIST INSTITUTE
EW	EACH WAY	SLD	SLAB ON GRADE
EA	EACH	SCHED	SCHEDULE
EL	ELEVATION	SIM	SIMILAR
ELEC	ELECTRICAL	SPK	SPRINKLER
ES	EDGE	STD	STANDARD
EXT	EXTERIOR	STRUCT	STRUCTURAL
FS	FAR SIDE	TC	TOP OF CONCRETE
FIN	FINISH	TYP	TYPICAL
FM	FOUNDATION MISCELLANEOUS	UNO	UNLESS NOTED OTHERWISE
FND	FOUNDATION	VERT	VERTICAL
FT	FOOT	WP	WITH
GA	GAUGE	WB	WEIGHT
GALV	GALVANIZED	WPF	WIDE FLANGE
GC	GENERAL CONTRACTOR	WP	WORKPOINT
HP	HIGH POINT	WWF	WELDED WIRE FABRIC
HORIZ	HORIZONTAL		
HT	HEIGHT		
IBC	INTERNATIONAL BUILDING CODE		
IN	INCHES		
INT	INTERIOR		
Kips	KIP		
L	ANGLE		
LL	LIVE LOAD		
LLH	LONG LEG HORIZONTAL		

PROGRAM FOOTNOTES
1. THE REINFORCEMENT ABOVE SHALL BE INVESTIGATED IN ACCORDANCE WITH CHAPTER 1 OF THE IBC BY A CERTIFIED SPECIAL INSPECTOR FROM AN ETTAP-CERTIFIED TESTING ABOVE / FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS. REFER TO THE PROJECT SPECIFICATIONS & THE PROJECT STRUCTURAL INSPECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL VERIFIED & INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR & BUILDING OFFICIAL. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS WILL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. ANY DEVIATIONS FROM THE PLANS AND SPECIFICATIONS ARE EQUALLY TO ALL BUILDER DESIGNED COMPONENTS.
2. CONT. = CONTINUOUS. SPECIAL INSPECTOR: SPECIAL INSPECTOR TO PRESENT WHEN & WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED. (IBC SECTION 1704).
3. PERIODIC = PERIODIC OR FINAL INSPECTION. SPECIAL INSPECTOR MUST INTERMITTENTLY PRESENT WHEN THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.
4. OBSERVE = SPECIAL INSPECTOR TO VALIDATE THAT THE REQUIREMENTS OF OPERATIONS MEET WHAT NOT BE DELIVERED (MEANING WHERE MANDATORY USE OF IBC SECTION 1704).
5. PERFORM = SPECIAL INSPECTOR SHALL PERFORM TASKS FOR EACH JOINT, CONNECTION, ELEMENT OR MEMBER AND CROSS SECTION (IBC).
6. SPECIAL INSPECTION IS NOT REQUIRED FOR WORK PERFORMED BY AN APPROVED FABRICATOR (IBC SECTION 1704.2.5).
7. ALL WELDS SHALL BE VISUALLY INSPECTED.
8. INSPECTION FOR DEFORMATIONS OF CONSTRUCTION SHALL BE THE TIME AT THE MATERIALS IN THE CONSTRUCTION TYPE PHASE. ON SITE CONTRACTORS INSPECTION WILL ALSO BE REQUIRED. SUBMIT DOCUMENTATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE.

SD STEEL DECKING NOTES
SD1 STEEL ROOF DECK SHALL CONFORM TO ASTM A1008 DESIGNATION SS GRADE 33 MINIMUM WITH 33 KSI MINIMUM YIELD STRENGTH. ROOF DECK SHALL BE PAINTED TOP AND BOTTOM WITH A GRAY ANTIRUST COAT OF PRIMER OR COATED WITH GALVANIZING CONFORMING TO ASTM A653 / 653 WHERE LEFT PERMANENTLY EXPOSED TO WEATHER.

STEEL FLOOR DECK SHALL CONFORM TO ASTM A653 DESIGNATION SS GRADE 33 MINIMUM WITH 33 KSI MINIMUM YIELD STRENGTH. FLOOR DECK SHALL BE COATED WITH GALVANIZATION CONFORMING TO ASTM A653 / 653 (ON INNER LIST PERMANENTLY EXPOSED TO WEATHER)

SD2 MINIMUM DECK GAUGE ON PLANS ARE BASED ON 2 SPAN UNFINISHED CONDITIONS AND MIN. PROPERTIES AS FOLLOWS:

SD21 ROOF DECK - VULCRAFT 1.5B 20 GA. PAINTED
Ip = 0.181 IN⁴
Sp = 0.192 IN³
Ip = 0.163 IN⁴
Sp = 0.157 IN³
Fy = 33 KSI

SD3 LOAD TO DECK MANUFACTURER OFFICE SHALL BE STORED OFF THE GROUND WITH ONE END ELEVATED TO PROVIDE DRAINAGE AND SHALL BE PROTECTED FROM THE ELEMENTS WITH A WATERPROOF COVERING, EQUIVALENT TO HOOD CONSTRUCTION

SD4 PANEL FASTENING
SD41 ROOF DECK
PANEL FASTENER LAYOUT SHALL BE 36/8 PATTERN WITH #12 SELF-TAPPING SCREWS AND TO BE FASTENED AT MIDSPAN OF EXTERIOR EXTENDER (UNPURLINS WITH #8 SELF TAPPING SCREWS

SD5 END LAP MUST OCCUR OVER SUPPORTS. ALIGNING OF PANELS EXTENDING PAST CENTERLINE OF SUPPORTS.

SD6 FIELD CUT & TRIM TO SUPPLIER REQUIRED

SD7 DO NOT INTERRUPT POINT LOADS FROM ROOF DECKING LOADING HANGERS AT ROOF. DO NOT SUSPENDED ITEMS. CONTRACTOR INSTALLING WITH OTHER TRADE ENGINEER AND PROVIDE CLIP PLANS TO TRANSFER TO THE STRUCTURE SUPPORTING THE DECK

PC PRECAST CONCRETE FRAMING DESIGNS
PC1 PRECAST CONCRETE FRAMING SHALL COMPLY WITH CHAPTER 19 OF THE IBC AS WELL AS THE CURRENT EDITION OF THE PCI

PC2 DESIGN OF PRECAST CONCRETE FRAMING SHALL BE BY CONTRACTOR. CONCRETE MIXES AND CODE CONFORMANCE SHALL BE AS REQUIRED BY STRUCTURAL NOTES UNDER MINIMUM COMPRESSIVE STRENGTH SHALL BE = 5,000 PSI. PRESTRESSING STRAND IN STRUCTURAL MEMBERS IS THE REQUIRED MINIMUM. CONCRETE SHALL NOT CONTAIN MORE THAN 0.06% CHLORIDE ION AT PLACEMENT OF CEMENT.

PC3 DESIGN OF PRECAST CONCRETE FRAMING SHALL INCLUDE ANY ADDITIONAL REINFORCING THAT IS REQUIRED FOR HANDLING AND ERECTION

PC4 PRECAST CONCRETE FRAMING SHALL BE DESIGNED TO RESIST THE MINIMUM LOADS INDICATED IN STRUCTURAL NOTES. DEAD WEIGHT (DEAD LOAD) AND ADDITIONAL LOADING INDICATED ON PLAN, PLANS, DETAILS, SHOP DRAWS, AND A MINIMUM NET UPLIFT AS SHOWN IN STRUCTURAL NOTES

PC5 PRECAST CONCRETE MEMBER HEIGHT SHOWN ON THESE DRAWINGS ARE APPROXIMATE. FINAL HEIGHTS AND PROPERTIES SHALL BE VERIFIED BY THE PRECAST STRUCTURAL TURNER

PC6 PERIMETER AND ORIENTATION OF HOLLOW CORE ARE SHOWN ON PLAN. BEARING DEPTHS AND DETAIL OF HOLLOW CORE UNITS TO BE DEVELOPED BY THE PRECAST STRUCTURAL TURNER

PC7 DIMENSIONS SHOWN ON THESE DRAWINGS ARE PRELIMINARY. FINAL TOLERANCE DEPTH FOR THE BUILDING STRUCTURE SHALL BE THE RESPONSIBILITY OF THE PRECAST STRUCTURAL TURNER

PC8 PRECAST UNITS SHALL SUPPORT DEAD LOAD OF 10 PSF IN ADDITION TO FORMING LOADS

PC9 HEADERS OR CAP AND BRACKETS, BEARING AREA, SHIM, AND GROUTING TO BE PROVIDED AND NOT LOCATED ALONG WITH THE PRECAST FRAMING BY THE SUPPLIER. SPECIAL HANDLING, TIMING OR EQUAL REQUIRED FOR BEARING ON CONCRETE OR CMU

PC10 HOLLOW CORE PLANK MUST HAVE KEYWAY CONTINUOUSLY OF CUTTING

PC11 PRECAST UNITS SHALL BE INSTALLED IN PROPER SEQUENCE WITH SUFFICIENT TEMPORARY BRACING TO CONTROL ALIGNMENT & DEFLECTION. MEMBERS SHALL BE PROPERLY ANCHORED AND LEVELED UNTIL GROUTED

PC12 THE DESIGN CHANGES IS & THE PRECASTER TO NOTIFY STRUCTURAL ENGINEER OF RECORD IF THIS CHANGES IS NOT ACCEPTABLE

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HENNING COMPANIES
DSI SHOP & OFFICE
HUXLEY, IA

No.	Description	Date
A	PRELIMINARY	01.23.2020
B	CONSULT SUBMITTAL	01.24.2020
C	PRELIMINARY REVISIONS	01.30.2020
1	ISSUED FOR LONG PRICING	04.06.20

Job No RR20010 Proj. Mgr WWW

Sheet Title
STRUCTURAL NOTES

Sheet No
S0.1

LICENSED PROFESSIONAL ENGINEER
KIRK A. MACUMBER
15819
IOWA

CN1 GENERAL NOTES

CN1 CONCRETE WORK SHALL CONFORM TO CHAPTER 19 OF THE IBC.

CN2 WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND PATTERNED TO A MINIMUM 1/4" AMPLITUDE.

CN3 ALL EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE.

CN4 CONCRETE FORMWORK

CN4.1 SLEEVES, OPENINGS, CONDUIT, AND OTHER EMBEDDING NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO POURING CONCRETE. OPENINGS PROVIDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN 1/3 THE OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER.

CN4.2 VERIFY ALL BLOCK OUTS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DEPARTMENTS PRIOR TO POURING.

CN5 CONCRETE REINFORCEMENT

CN5.1 FABRICATION, FABRICATION, AND PLACEMENT OF REINFORCEMENT SHALL CONFORM TO ACI 315.

CN5.2 ALL REINFORCEMENT TO BE ASTM A615 GRADE 60 (U.O.N.). WELDED WIRE FABRIC TO BE ASTM A185 WITH SIZE AND SPACING AS SHOWN AND SHALL IRON WIRE REINFORCEMENT SHALL BE LIMITED IN PLACES USING AISI AND SALLED IRON WIRE REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.

CN5.3 ALL CONTINUOUS REINFORCING SHALL BE SPLICED USING CLASS B TENSILE SPLICE U.O.N.

CN5.4 WHEN IN FRAME AND SHALL BE IMPROVED ON WELL-CURED CONCRETE BLOCK OR APPROVED METAL CHAIRS AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1.

CN5.5 CONTINUE HORIZONTAL WALL BARS THROUGH OR ANCHORED COLUMNS AND INTERSECTING WALLS. REFER TO SPECIAL DETAILS FOR LAPS OF CORNER BARS AND BARS IN SMALL WALL SECTIONS. SLAB BARS SHALL BE HOOKED INTO WALLS. HOOKED BARS SHALL BE PROVIDED TO MATCH SLAB REINFORCING. PROVIDE HOOKED DOWELS FROM FOOTINGS TO MATCH VERTICAL WALL REINFORCING.

CN5.6 ADD TWO DIAGONAL #5 BARS FOR FIRST LOAD OPENING AT EACH CORNER OF FOUNDATION OR SLAB OPENING, U.O.N.

CN5.7 U.O.N., INSTALL WWF 1 1/2" FROM TOP OF ALL SLABS ON GRADE. TOPPING SLABS ON DECK OR SUPPORT SLABS ON PRECAST: LAP JOINTS TWO FULL MESHES, BUT NOT LESS THAN 6". AT CONSTRUCTION JOINTS, LOCATE WWF AT MID DEPTH OF SLAB.

CN6 COVERAGE FOR REINFORCEMENT

CN6.1 CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"

CN6.2 CONCRETE EXPOSED TO EARTH AND WEATHER

#5 THROUGH #18 BARS 2"

#5 BAR AND SMALLER 1 1/2"

CN6.3 CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND

SLABS, WALLS, JOISTS

#11 AND #18 1 1/2"

#11 BAR AND SMALLER 3/4"

BEAMS, COLUMNS

PRIMARY REINFORCEMENT

TIES, STIRRUPS, SPIRALS 1 1/2"

CN7 MINIMUM 28 DAY COMPRESSIVE STRENGTHS SHALL BE VERIFIED BY STANDARD 28 DAY CYLINDER TESTS PER ASTM C39 AND SHALL BE AS FOLLOWS:

FOOTINGS f'c = 4,000 PSI

CURBS, BRACKETS, WALLS f'c = 4,000 PSI

WALL FOOTINGS, COLUMNS f'c = 4,000 PSI

SLABS ON GRADE f'c = 4,000 PSI

TOPPING SLABS f'c = 4,000 PSI

CN8 SPECIAL INSPECTOR SHALL BE NOTIFIED IF ANY WATER IS TO BE ADDED IN FIELD.

CN9 CONCRETE FOUNDATIONS

CN9.1 ALL FOUNDATION EXCAVATIONS MUST BE RE-REVIEWED AND APPROVED BY THE FIELD ENGINEER PRIOR TO PLACEMENT OF FOOTINGS.

CN9.2 ACCURATELY SET AND SECURELY SUPPORT REINFORCING AND DOWELS AND ANCHOR BOLTS PRIOR TO PLACEMENT OF CONCRETE. WIRE STRIPPING OR PLASTICS OF REINFORCING DOWELS, AND ANCHOR RODS IS NOT ALLOWED.

CN9.3 PROVIDE CONSTRUCTION JOINTS, EXPANSION JOINTS, DOWELS, AND HORIZONTAL REINFORCING TIES AND ANCHORING AS SHALL BE ACCEPTED STANDARDS OF THE TRADE, ANCHOR RODS PER ASTM F1554 AS SHOWN.

CN9.4 ALL FOUNDATION SLAB ENTIRETY SHALL BE KEYED CONTINUOUS. REINFORCING SHALL EXTEND ONE FOOT BELOW FINISH GRADE IN PLACE OF SOLATE FOUNDATION SOLID JOINTS AT EXPANSION JOINTS IN ACCURATE WATER WORK POSSIBLE.

CN9.5 REINFORCING SHOWN ON DETAILS IS THE REQUIRED MINIMUM AT CONTINUOUS FOOTINGS AND CONCRETE. ADDITIONAL REINFORCING MAY BE PLACED TO ASSIST IN EASE OF CONSTRUCTIBILITY. ADDITIONAL REINFORCING MUST BE SUBMITTED FOR REVIEW ON SHOP DRAWINGS.

CN10 PRIMARY MINIMUM 2000 PSI NON-SHRINK, NON-METALLIC GROUT UNDER COLUMN BASE PLATES. GROUT SHALL NOT CONTAIN ALUMINUM. COLUMN BASES SHALL BE GROUTED BEFORE PLACEMENT OF CONCRETE TOPPING ON STEEL FRAME.

CN11 MINIMUM 6" CONCRETE SLAB ON GRADE WITH 6" AS SHOWN ON PLAN OVER WELL COMPACTED OVER A MINIMUM 6" COMPACTED TERRAMITE GRANULAR FILL. (TOP U.N.O. ON DRAWINGS AND GEOTECHNICAL REPORT).

CN12 PROVIDE CONTROL JOINTS AS FOLLOWS, U.N.O.:

CN12.1 SURFACE OF SLAB ON GRADE (PRACTICAL MAX):

SLAB ON GRADE 10' x 10'

PRECAST TOPPING SLABS 10' x 10'

CN12.2 EXPOSED FOUNDATION WALL:

RETAINING WALLS 15' x 15'

BASEMENT WALLS 30' x 30'

CN12.3 CONTROL JOINT LAYOUT SHALL MAINTAIN AN APPROXIMATE ASPECT RATIO OF 1:1.

CN13 EXPOSED SLAB ON GRADE

CN13.1 ALL SLAB ON GRADE CONTROL JOINTS ZONE JOINT SHALL BE COORDINATED WITH THE ARCHITECT WHERE THE SLAB IS EXPOSED.

CN13.2 CONTRACTOR SHALL PARTICIPATE IN PRE-CONSTRUCTION MEETING PRIOR TO ANY REPORTED CONCRETE SLAB ON GRADE FOUR CONTROL JOINTS SHALL PROVIDE ENGINEER WITH ANTICIPATED STENCIL SLAB ON GRADE CONTROL JOINT TOOLS FOR ARCHITECTURAL ENGINEER APPROVAL PRIOR TO PLACING CONTROL JOINTS. ALL CONTROL JOINTS TO BE PLACED AT ARCHITECTURAL EXPOSED CONCRETE SLAB PLAN.

CN14 CONCRETE ANCHORING

CN14.1 U.N.O., HEADED SHEAR STUDS TO BE NELSON HEADED ANCHORS WITH FLUXED END OR APPROVED EQUIVALENT AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

CN14.2 U.N.O., PRECOMPRESSED BAR ANCHORS, USE A SPECIALLY DESIGNED TYPE FOR OR APPROVED EQUIVALENT AND SHALL BE AUTOMATICALLY END WELDED BY UTILIZING THE MANUFACTURER'S COMPACTED EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

CN14.3 U.N.O., EXPANSION BOLTS TO BE HILTI KWIK BOLT TZ, SIMPSON STRONG-BOLT 2 OR APPROVED EQUIVALENT WITH EQUAL TENSION AND SHEAR VALUES. SEPARATION ANCHORS SHALL BE INSTALLED BY STRICT ADHERENCE WITH MANUFACTURER'S RECOMMENDATIONS. DO NOT CUT REINFORCING IN NEW OR EXISTING CONCRETE DURING INSTALLATION.

CN14.4 U.N.O., EPOXY ANCHORS TO BE HILTI HIT-RE 500 SD, SIMPSON SET-XP OR APPROVED EQUIVALENT WITH EQUAL TENSION AND SHEAR VALUES. EPOXY ANCHORS SHALL BE INSTALLED BY STRICT ADHERENCE WITH MANUFACTURER'S RECOMMENDATIONS. DO NOT CUT REINFORCING IN NEW OR EXISTING CONCRETE DURING INSTALLATION.

CN15 PERMANENTLY EXPOSED EMBEDDED PLATES AND ANCHORS TO BE HOT DIP GALVANIZED AFTER FABRICATION. U.N.O., NO LONGER THAN WELDS SHALL BE PLACED ON EMBEDDED PLATES FOR ANCHORS FOR A MINIMUM OF 3 DAYS AFTER CASTING.

CN16 2" RIGID EXTRUDED POLYSTYRENE PERIMETER INSULATION (NO EQUAL TO BE INSTALLED ON INSIDE FACE OF FOUNDATION WHAUPPING, SLAB EXTENDING DOWN FROM THE TOP OF FOUNDATION 24 INCHES AND EXTENDING IN FROM THE EDGE OF FOUNDATION 24 INCHES BELOW SLAB.

CN17 EPOXY REPAIR ADHESIVE SHALL CONFORM TO ASTM C881 AND SHALL BE A TWO COMPONENT, 100% SOLIDS, NON-SAG, CONTRACTOR GRADE, AND A 100% PUT LIFE THE EPOXY ADHESIVE SHALL BE SUITABLE FOR USE IN DRY OR DAMP CONDITIONS. MINIMUM SHEAR STRENGTH SHALL BE 4,000 PSI. MINIMUM TENSILE STRENGTH SHALL BE 4,000 PSI. MIXING SIZES AND INSTALLATION SHALL BE STRICT COMPLIANCE WITH THE REPAIR SPECIFICATIONS. DO NOT CUT REINFORCING IN NEW OR EXISTING CONCRETE DURING PLACEMENT.

CN18 COLD WEATHER PROTECTION

CN18.1 DURING COLD WEATHER CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR PROTECTING CURING CONCRETE PER THE POINTS OF ACI 306.

CN18.2 DURING COLD WEATHER CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR PROVIDING CONDITIONS THAT DO NOT EXTEND TO FROST DEPTH FOR HEATING AT CONTRACTOR'S OPTION, BOTTOM OF FOOTINGS MAY BE EXTENDED BELOW THE FROST ZONE IN LIEU OF HEATING PROTECTION METHODS DO NOT REINFORCING WILL BE PROVIDED EXPANDED POLYSTYRENE ALL INSULATION WORK SHALL BE PLACED OF THE CONTRACTOR AND NOT COMPRIMIBLE, DRY SURFACE BELOW.

CN18.3 CONTRACTOR TO PROVIDE A FROST PROOF FOOTER TYP. (ROOF DETAIL 3) ALL EXTERIOR DOORS. SEE ARCH. FOR DOOR LOCATIONS.

S2 STEEL FRAMING NOTES

SF1 STEEL FRAMING WORK SHALL COMPLY WITH CHAPTER 22 OF THE IBC.

SF2 STEEL FRAMING MATERIALS

SF2.1 WF SECTIONS

ASTM A992 Fy=50,000 PSI

SF2.2 TUBULAR STEEL

ASTM A500 GR B Fy=46,000 PSI

SF2.3 CHANNELS, ANGLES, SHAPES, PLATES

ASTM A36 Fy=36,000 PSI

SF2.4 PIPES

ASTM A53 GR B Fy=35,000 PSI

SF2.5 HEAVY SECTIONS, WF SHAPES

ASTM A588 GR B (WEATHERING STEEL)

MIN. TENSILE STRENGTH Fu=70,000 PSI

MIN. YIELD STRENGTH Fy=50,000 PSI

SF2.6 STEEL JOISTS

SERIES K JOISTS

SF2.7 WELDING SPECIFICATIONS

E70XX

SF3 STEEL ERECTION SHALL COMPLY WITH ALL OSHA, STATE, LOCAL AND UNIFORM REGULATIONS. IN ADDITION, AT THE END OF THE WORK DAY, ALL EQUIPMENT MUST BE FRAMED WITH REINFORCING MEMBERS IN TWO DIRECTIONS, OR ADEQUATELY GUYED OR BRACED IN BOTH DIRECTIONS. TEMPORARY GUYING/BRACING IS THE RESPONSIBILITY OF THE ERECTOR (DESIGN AND INSTALLATION).

SF4 DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE AISC STEEL CONSTRUCTION MANUAL, ASD 13th EDITION AND COMMENTARY, AND DRAWING DETAILS.

SF5 ALL BOLTS FOR STRUCTURAL STEEL CONNECTIONS PER ASTM A325M-N, AND SHALL CONFORM TO THE RCSC SPECIFICATION. PLATE FOR STEEL JOINTS MAY BE ASTM. BOLTS SHALL BE SNUG-TIGHT U.N.O.

SF6 WELDING SHALL CONFORM TO THE AWS CODES FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1 AND APPROVED BY THE STRUCTURAL ENGINEER. THE WPS SHALL BE SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER METAL MANUFACTURER.

SF7 WELDS SHALL BE MADE USING STICK ELECTRODES AND SHALL BE 3/16" MINIMUM U.N.O. ALL WELDING FOR STRUCTURAL STEEL CONNECTIONS TO BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1.

SF8 FOR COMPLETE JOINT PENETRATION WELDS, WELDS SHALL BE MADE WITH FILLER METAL THAT HAS A MINIMUM CHARPY TOUGHNESS OF 20 FT-LBS AT 40 F.

SF9 WELDING TO JOIST WEB MEMBERS IS PROHIBITED. WELDING TO JOIST BOTTOM CHORDS IS PROHIBITED WITHOUT THE APPROVAL OF THE ENGINEER, WITH THE SOLE EXCEPTION OF JOIST BEARING PLATE, PANEL BRACING, ROOF SHEARING, AND ALL OTHER WELDED ATTACHMENTS SHALL BE MADE TO JOIST TOP CHORD SHALL BE MADE ONLY AT JOIST PANEL POINTS.

SF10 ALL STEEL STAIRS, COLUMNS, AND BARCONS SHALL PROVIDE A SINGLE COAT OF SHOP APPLIED PRIMER.

SF11 PERMANENTLY EXPOSED STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION U.N.O.

SF12 CONNECTIONS

SF12.1 WHERE CONNECTIONS ARE NOT SHOWN, THE CONNECTIONS SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE REQUIREMENTS OF AISC FOR REFERENCE FOR THE SHEAR CAPACITIES BELOW:

MAXIMUM SHEAR CAPACITIES (VERTICAL LOAD)

SHAPE	SHEAR CAPACITY	SHAPE	SHEAR CAPACITY
W8	16 KIPS	W21	52 KIPS
W10	18 KIPS	W24	72 KIPS
W12	20 KIPS	W27	76 KIPS
W14	21 KIPS	W30	94 KIPS
W16	43 KIPS	W33	102 KIPS
W18	53 KIPS	W36	115 KIPS

SF12.2 ANY CONNECTION REACTIONS EXCEEDING THE ABOVE MINIMUM SHEAR CAPACITIES ARE NOTED IN KIPS AT EITHER END OF THE MEMBER ON THE STRUCTURAL FRAMING PLANS.

SF12.3 BOLT CONNECTION SHALL USE A MINIMUM 3 ROWS OF BOLTS.

SF12.4 ALL CONNECTIONS SHALL SATISFY THE REQUIREMENTS OF AISC AND OSHA.

SF12.5 MOMENT CONNECTIONS ARE INDICATED ON DRAWINGS IN A DASHED FRAME ON THE END OF THE MEMBER TO BE MOMENT CONNECTED. IF THE BEAM END MOMENT IS NOT SHOWN, DEVELOP FULLY MOMENT CAPACITY OF MEMBER ABOUT MAJOR AXIS. WHERE AVAILABLE, USE SHEAR TAB WELD CONNECTION FROM DIAGRAM CONNECTION.

SF12.6 WHERE BEAMS ARE NOT SHOWN INTO MASONRY AND BEAR ON CMU SPACE, SHALL ANCHOR WITH 3/4" DIA. ASTM F1554 GRADE 36 ANCHOR BOLTS. TILT HOLES IN BEAM FLANGE 2" PARALLEL TO BEAM TO ALLOW FOR ANCHOR BOLTS.

SF12.7 AT OVERSLOTTED HOLES WITH BOLTS INSTALLED AS NOTED, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE HOLE DIMENSIONS PROPERLY WITH THE MINIMUM NUMBER OF 3 RECOMMENDED DRILL BIT DIAMETER.

SF13 STEEL JOISTS

SF13.1 STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED TO REACT THE LOADS SUMMARIZED ON THE DRAWINGS AND SHALL COMPLY WITH THE REQUIREMENTS OF THE STEEL JOIST INSTITUTE (SJI). COMPLETE THE STEEL JOIST MANUFACTURER SHALL BE APPROVED BY THE SJI. JOIST MANUFACTURER SHALL VERIFY THAT CONSTRUCTION MEMBERS CONFORM TO THE JOIST DESIGN.

SF13.2 IN ADDITION TO THE LOADS NOTED ON THE DRAWINGS, JOIST SHALL BE CAPABLE OF SUPPORTING A 250 POUND CONCENTRATED LOAD PLACED ANY POINT ALONG THE TOP AND BOTTOM CHORD.

SF13.3 ROOF JOISTS SHALL BE DESIGNED FOR A MINIMUM NET UPLIFT AS SHOWN IN STRUCTURAL NOTES.

SF13.4 STRUCTURAL ENGINEER OF RECORD TO BE APPRISED OF ANY SHIFT OF DAMAGED MEMBERS OF BAR JOISTS.

SF13.5 U.N.O., FIELD WELD ALL JOISTS. WELDING BOTTOM JOISTS TO SUPPORTS (WITH A MINIMUM OF ONE FILLET WELD 1.5" LONG FOR A JOIST AND ONE 1.5" FILLET WELDS 1.5" LONG FOR LH JOISTS.

SF13.6 BOTTOM CHORD EXTENSION, WHERE NOTED, SHALL BE FIELD WELDED. WHEN ATTACHING OF JOIST AND TO BEAM OR COLUMN, DO NOT PERMITTED EXTENSION WELDS IN BOTTOM CHORD OR JOIST. WELD ONLY AFTER CONCRETE OR ROOF SHEAR FIELD PLATE.

SF13.7 PROVIDE SPACING IN CONFORMANCE WITH THE STANDARDS.

SF13.8 PROVIDE DIAGONAL REINFORCING FIELD WELDED TO TOP AND BOTTOM CHORD OF JOIST JOIST. SHALL BE DIAGONAL BRACING TO BE FIELD WELDED TO FIRST JOIST OF EXTENSION JOIST AND TO TOP OF THE END OF A JOIST JOIST HORIZONTAL BRACING TO BE FIELD WELDED ALONG TOP & BOTTOM CHORDS OF JOIST JOIST.

SF13.9 WHERE JOIST BRACING REQUIRED, WITH DIAGONAL BRACING, EXTENDED, FIELD WELDED TO BEAM.

SF13.10 CONTINUOUS TO PROVIDE STEEL SUPPORT BEAM AT BASE TO ACHIEVE FULL BEARING CONTACT FOR JOIST, BEARING ON SLOPED SURFACE.

SF13.11 BOLTED JOIST SHALL USE STANDARD WASHERS UNDER BOTH HEAD AND NUT.

SF14 DUE TO ANY AND ALL DEFLECTIONS AND DAMAGES, CONTRACTOR SHALL MAKE PROVISIONS FOR ADDITIONAL CONCRETE AS REQUIRED TO ACHIEVE A FLAT FLOOR SURFACE.

SF15 INSURE OPENINGS FOR LIGHTS, MECHANICAL EQUIPMENT, ETC. OCCUR IN FLOOR SLAB. PROVIDE BOX OUTS ON TOP OF METAL DECKING PRIOR TO POURING CONCRETE SLAB. AFTER INSTALLATION OF MECHANICAL DUCTS & ETC. (THRU BOX OUTS), PLACE REMAINDER OF CONCRETE FLOOR.

DEVELOPMENT AND SPLICE LENGTH SCHEDULE (f'c = 4000 psi NW)

BAR SIZE	Ldc	Ldc	Lst	Lsc	Ldh	NOTES
#3	12"	9"	21"	17"	5"	Ldt = Tension Development Length Ldc = Compression Development Length Lst = Tension Lap Splice Length Lsc = Compression Lap Splice Length Ldh = Standard Hook Development Length db = Bar Diameter
#4	20"	12"	29"	23"	7"	
#5	24"	14"	37"	29"	8"	Ldt and Lst listed values apply where clear spacing of deformed or uncoated bars or cover is less than db, clear spacing of bars not less than 2db and clear cover not less than db. For other cases, multiply values by 1.5 for Ldt and Lst by 1.3.
#6	30"	17"	44"	35"	10"	
#7	42"	20"	57"	37"	12"	Ldt and Lst listed values can be multiplied by 1.3 if more than 12" of fresh concrete is cast below the development length or splice.
#8	48"	22"	62"	39"	14"	
#9	54"	25"	71"	44"	15"	Ldt listed values are for Class B lap splices. For Class A lap splice lengths, use the listed values by 1.3. Use Class A when the reinforcing exists beyond and extension beyond corners, opening, etc.
#10	60"	28"	81"	50"	17"	
#11	66"	31"	92"	57"	19"	Ldt, Lst and Ldh listed values to be multiplied by 1.3 for epoxy coated reinforcing.

Ldt, Lst and Ldh listed values to be multiplied by 1.3 for light weight concrete.

REINFORCING SCHEDULE (f'c=4000 psi)
1/4" = 1'-0"

LICENSED PROFESSIONAL ENGINEER
KIRK A. MACUMBER
15819
IOWA

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Des Moines, Iowa
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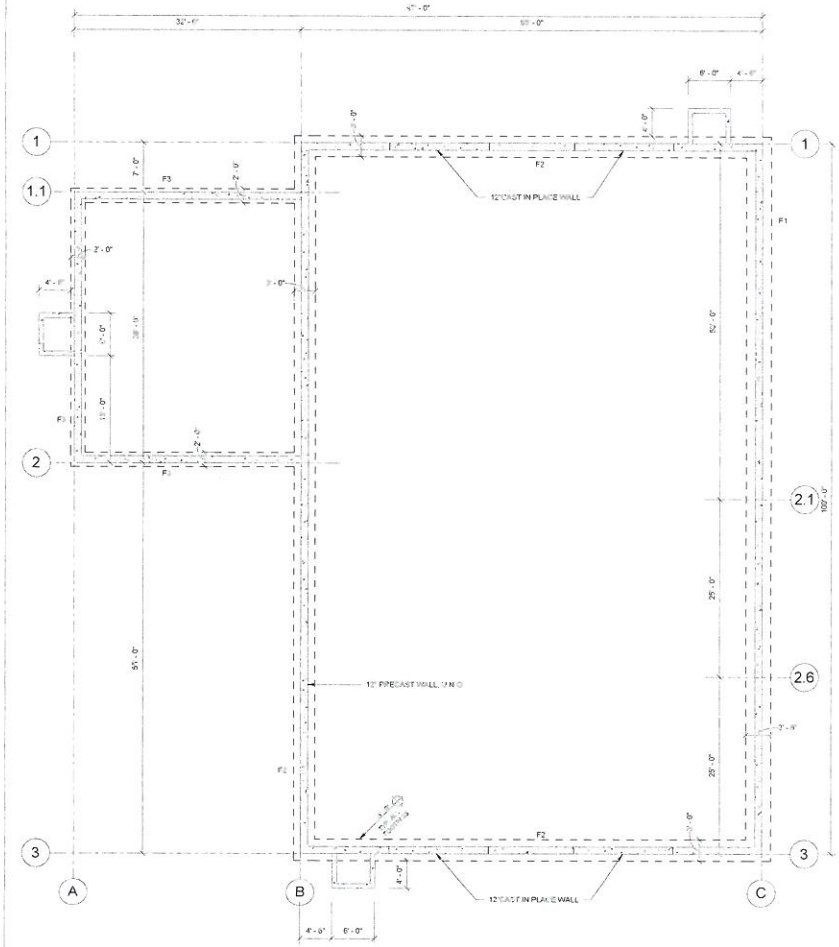
HENNING COMPANIES
DSI SHOP & OFFICE
HUDSON, IA

Job No.	Description	Date
A	PRELIMINARY	5/13/2020
B	PERMIT SET	5/15/2020
C	ISSUED FOR CONSTRUCTION	5/29/2020

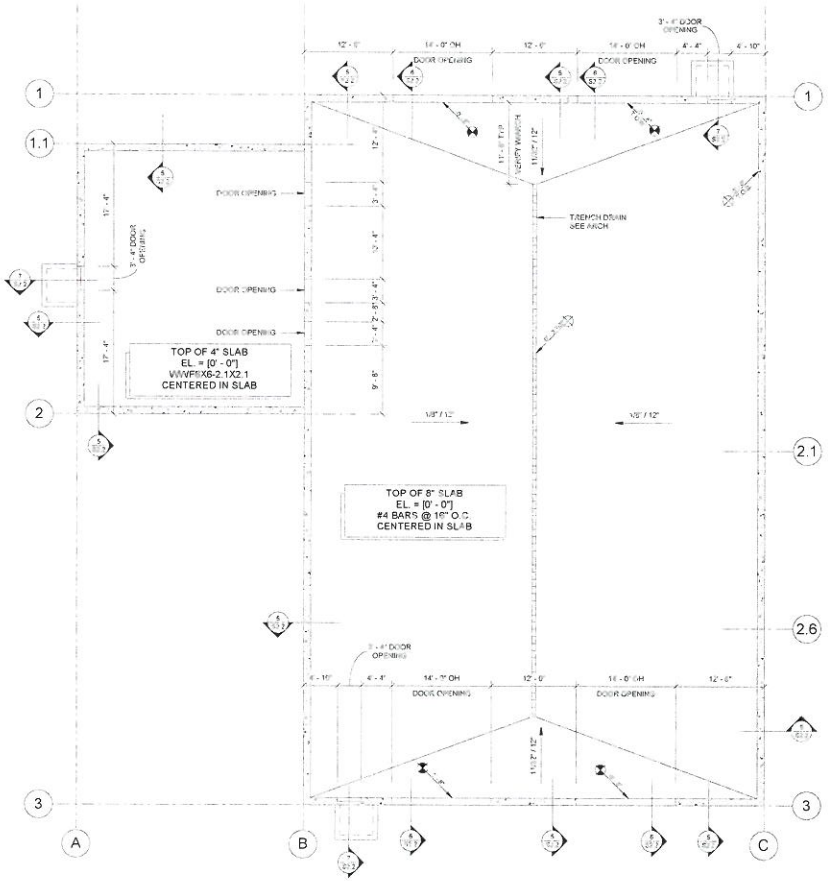
Job No: RRI20010
Proj. Mgr: WWN

Sheet Title: NOTES

Sheet No: S0.2



1 T/ FTG
1/8" = 1'-0"



2 T/ FF
1/8" = 1'-0"

NOTE
- PRECAST TO COORDINATE ALL DOOR OPENING DIMENSIONS WITH ARCHITECT

FOOTING SCHEDULE			
MARK	DIMENSIONS	REINFORCEMENT	NOTES
F1	CONT. x 3'-0" x 12"	#5 @ 12" O.C. TRANS. (2) #5 CONT	
F2	CONT. x 3'-0" x 12"	#5 @ 12" O.C. TRANS. (2) #5 CONT	
F3	CONT. x 2'-0" x 12"	#5 @ 12" O.C. TRANS. (2) #5 CONT	

FOUNDATION SYMBOL KEY
- T/ WALL/ STEEL
- T/ FOOTING
- T/ JOIST BEARING
- T/ BRICK LEDGE
- ELEV. STEP
- EXIST. BLDG

LICENSED PROFESSIONAL ENGINEER
KIRK A. MACUMBER
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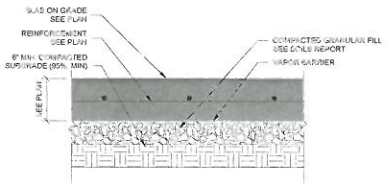
HENNING COMPANIES
DSI SHOP & OFFICE
HUXLEY IA

No.	Description	Date
A	ISSUED FOR PERMIT	01/13/2020
B	ISSUED FOR CONSTRUCTION	01/22/2020
1	ASBUILT	08/05/2020

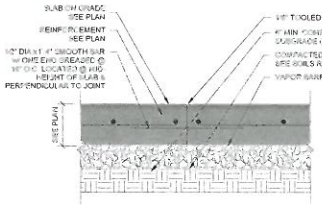
Job No. RR0000010
Proj. Mgr. VWW

Sheet Title
FOUNDATION PLAN

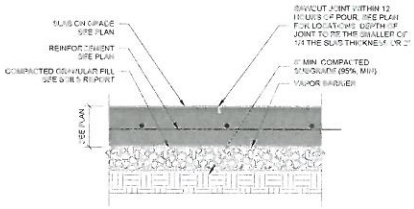
Sheet No
S1.1



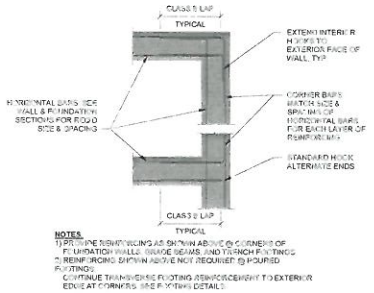
1 SLAB ON GRADE
1 1/2" = 1'-0"



2 SLAB ON GRADE CONSTRUCTION JOINT
1 1/2" = 1'-0"

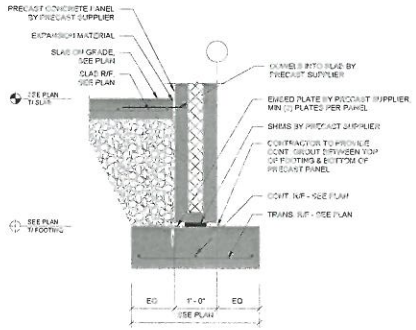


3 SLAB ON GRADE CONTROL JOINT
1 1/2" = 1'-0"

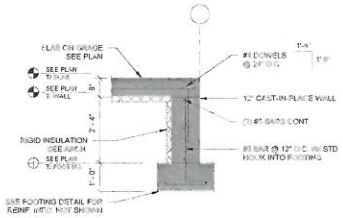


NOTES:
1) PROVIDE REINFORCING AS SHOWN ABOVE @ CORNERS OF FOUNDATION WALLS, GRADE BEAMS, AND TRENCH FOOTINGS.
2) REINFORCING SHOWN ABOVE NOT REQUIRED @ POURED FOOTINGS.
CONTINUE THAT REINFORCING FOOTING REINFORCEMENT TO EXTERIOR EDGE AT CORNERS. (SEE FOOTING DETAILS)

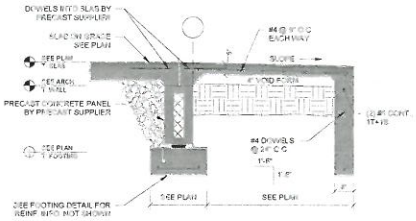
4 REINFORCING @ CORNERS
1/2" = 1'-0"



5 PRECAST FOOTING
3/4" = 1'-0"



6 SLAB AT OH DOOR
1/2" = 1'-0"



7 STOOP @ PRECAST
1/2" = 1'-0"

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HENNING COMPANIES
DSI SHOP & OFFICE
HUXLEY, IA

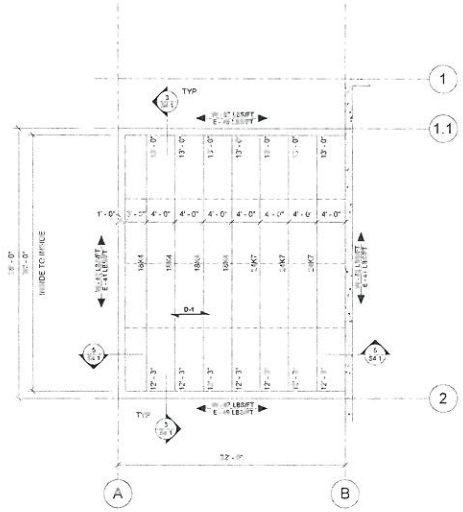
No.	Description	Date
A	PRELIMINARY	01/22/2009
B	CONSTRUCTION SET	01/26/2009
1	ADDED FOUNDATION SECTION	02/11/2009

Job No: RR20010
Proj. Mgr: WWW

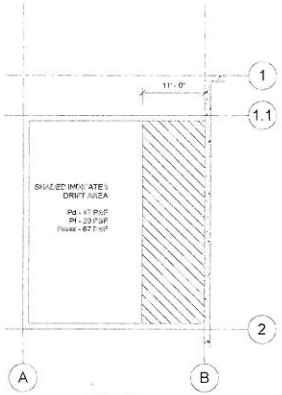
Sheet Title
FOUNDATION DETAILS

Sheet No
S2.2

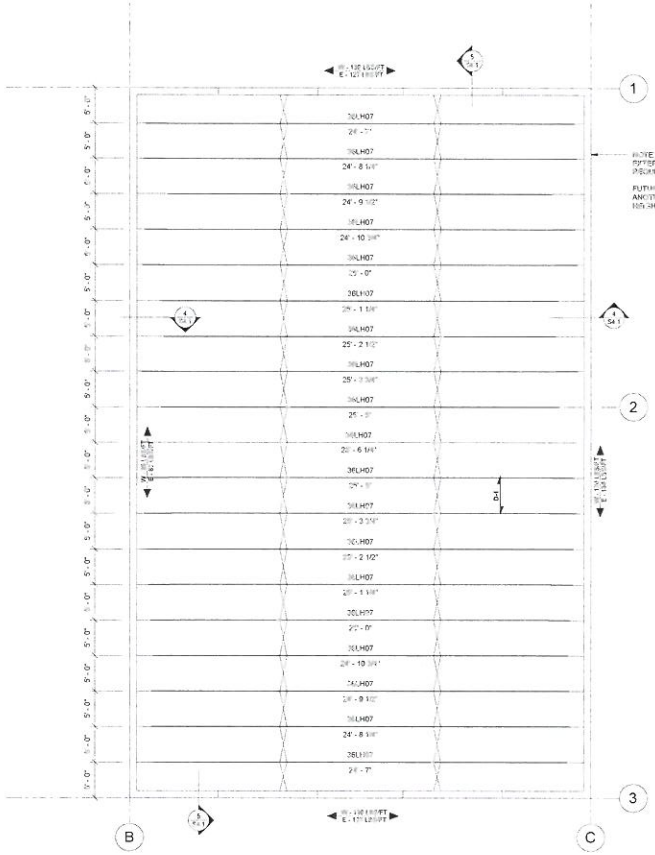
LICENSED PROFESSIONAL ENGINEER
KIRK A. MACUMBER
15819



1 OFFICE ROOF FRAMING
1/8" = 1'-0"



DRIFT PLAN



2 MAIN ROOF FRAMING
1/8" = 1'-0"

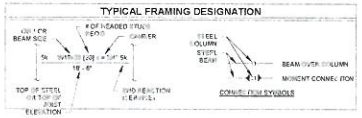
DECKING SCHEDULE

MARK	TYPE	DETAILS	NOTES
D-1	1 1/2" - 22 GA. TYPE B ROOF DECK	SEE S5.1 NOTE 5D4	

NOTES:

1. LATERAL FORCES RESISTING PLAN ARE SEISMIC LEVEL
2. MATERIAL DEFINITIONS: E - MEMBER AT EXTERIOR WALL; I - MEMBER AT INTERIOR WALL
3. SEE STRUCTURAL NOTES SHEET FOR GENERAL NOTES
4. SEE PLAN FOR WIDTH FOR REQUIRED OPENING IN FOUNDATION
5. FINISH FLOOR REINFORCEMENT TO BE DESIGNED BY PRECAST SUPPLIER
6. AT LH JOIST SHALL HAVE 9" SEAT DEPTH
7. AT LH JOIST SHALL HAVE 9" SEAT DEPTH
8. JOIST ELEVATION SHOWING TOP OF JOIST REPRESENT SEAT DEPTH FOR JOIST BEARING ELEVATION

TYPICAL FRAMING DESIGNATION



LICENSED PROFESSIONAL ENGINEER
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IOWA

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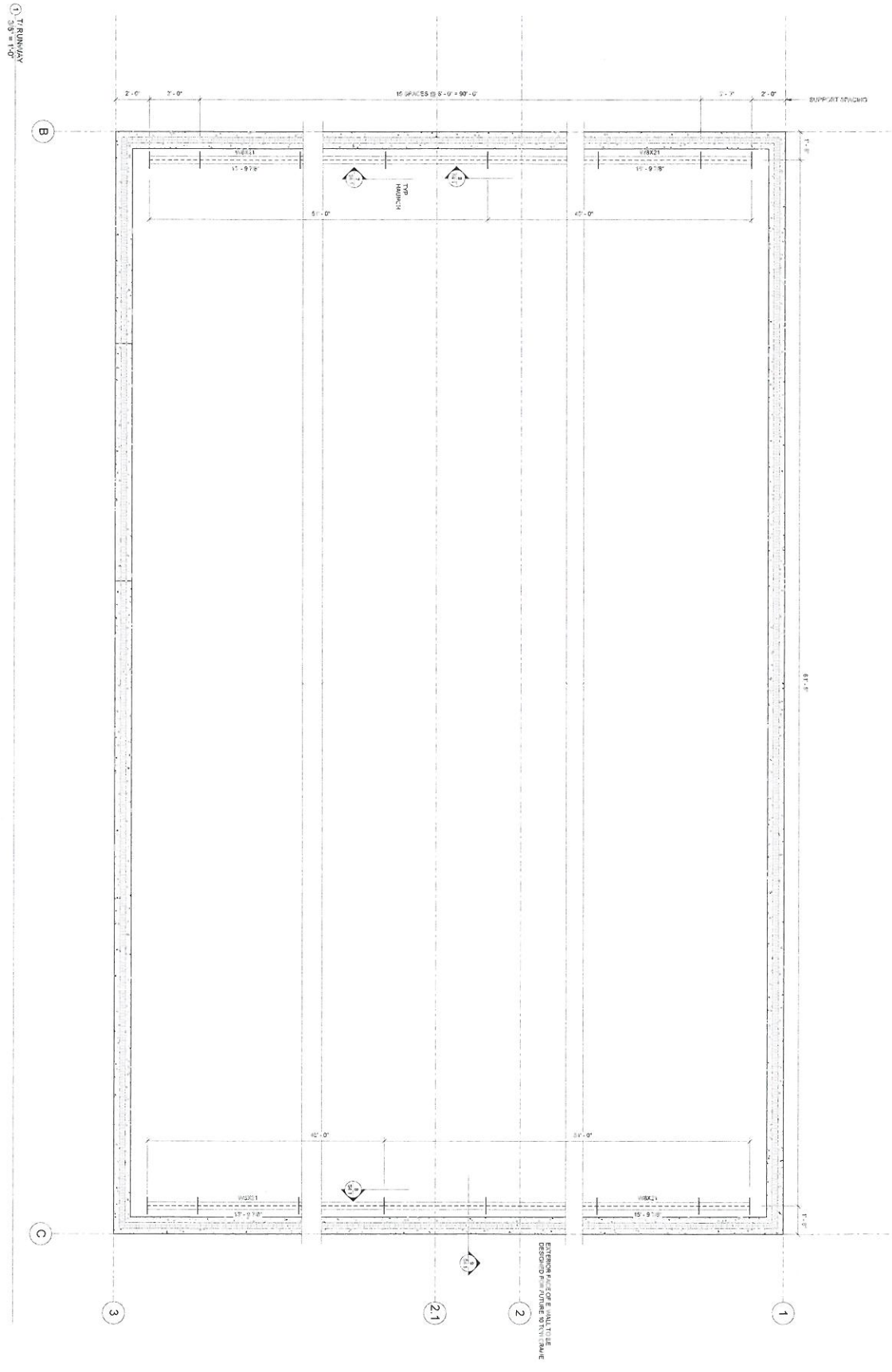
HENNING COMPANIES
DSI SHOP & OFFICE
HUXLEY IA

No.	Description	Date
A	PRELIMINARY	01/23/2020
B	PRELIM FOR REVIEW	01/24/2020
C	PRELIM FOR REVIEW	01/27/2020
D	ISSUED FOR CONSTRUCTION	02/07/2020

Job No: 7N120010
Proj. Mgr: WWW

Sheet Title: ROOF FRAMING PLAN

Sheet No: S3.1



LICENSED PROFESSIONAL ENGINEER
KIRK A. HAGGBLADE
13819

No.	Description	Date
A	PRELIMINARY	01/23/2020
B	PRE-CAST SUBMITTAL	01/28/2020
1	ISSUED FOR CONSTRUCTION	02/28/2020

Job No. 18120010
Sheet Title OH CRANE FRAMING
Sheet No S3.2

HENNING COMPANIES

DSI SHOP & OFFICE

HUXLEY, IA

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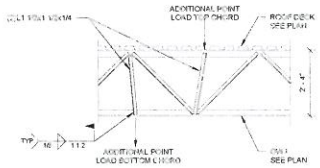
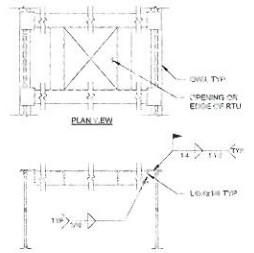
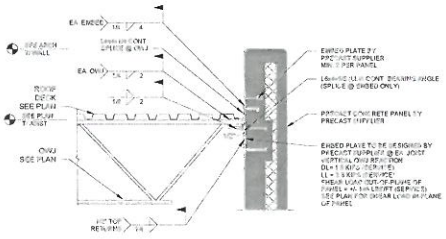


1 POINT LOAD @ OWJ DETAIL
1/2" = 1'-0"

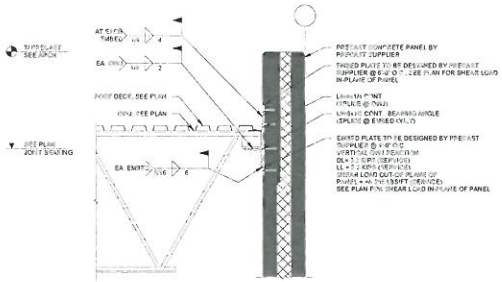


2 WELDED ANGLE FRAME @ JOIST DETAIL
3/4" = 1'-0"



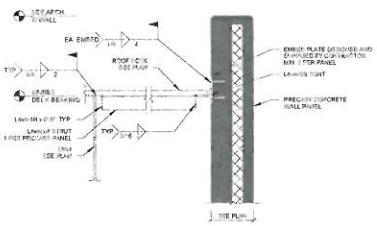
NOTES:
1) SEE TYPICAL DECK ANGLE SPLICE DETAILS FOR REQUIRED ANGLE SPLICES

3 K-SERIES JOIST BEARING DETAIL PRECAST WALL
3/4" = 1'-0"



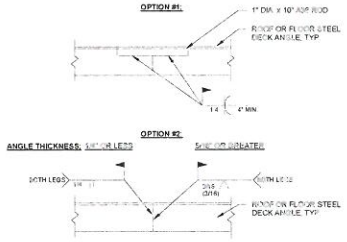
NOTES:
1) SEE TYPICAL DECK ANGLE SPLICE DETAILS FOR REQUIRED ANGLE SPLICES

4 LH JOIST BEARING DETAIL @ PRECAST WALL
3/4" = 1'-0"



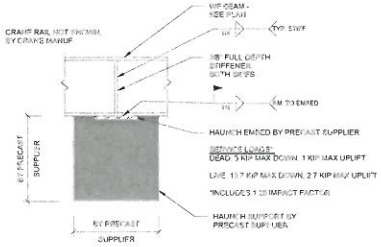
NOTES:
1) SEE PLAN FOR UNIFORM TOP SHEET FOR ROOF PANEL LISTING LOADS
2) SEE TYPICAL DECK ANGLE SPLICE DETAILS FOR REQUIRED ANGLE SPLICES
3) JOIST BRIDGING (WE DRAWING) SEE JOIST DROP DRAWING FOR SIZE AND WELDS
4) SHIPPING TO FIELD WHERE JOIST CHANGES WITH PRECAST WALL ENVELOPE

5 ROOF DECK TO PRECAST WALL
3/4" = 1'-0"

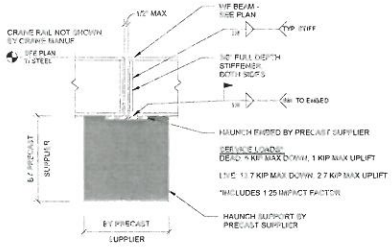


NOTES:
1) SPACE 3/8" REQUIRED BETWEEN ALL ROOF DECK ANGLES AND ALL FLOOR DECK ANGLES UNO

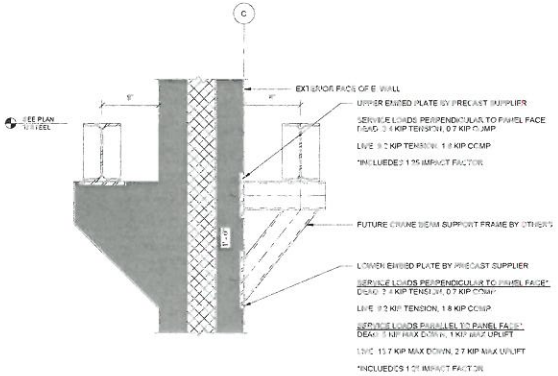
6 TYPICAL DECK ANGLE SPLICE DETAILS
1 1/2" = 1'-0"



7 TYP. HAUNCH DETAIL
1 1/2" = 1'-0"



8 CRANE BEAM BUTT SPLICE
1 1/2" = 1'-0"



9 FUTURE CRANE RAIL
1 1/2" = 1'-0"

LICENSED PROFESSIONAL ENGINEER
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15819

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Des Moines, Iowa
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HENNING COMPANIES
DSI SHOP & OFFICE
HULLY IA

No.	Description	Date
A	PRELIMINARY	01/21/2009
B	PRECAST SUBMITTAL	01/26/2009
1	ISSUED FOR CONSTRUCTION	06/05/2009

Job No. R/R20010
Proj. Mgr. WWW

Sheet Title
FRAMING DETAILS

Sheet No.
S4.1

Architectural Materials

DSI HUXLEY

S MAIN AVE
HUXLEY, IOWA 50124

Sheet List Table

Sheet Number	Sheet Title
C000	COVER SHEET
C100	SITE PLAN
C200	GRADING PLAN
C300	UTILITY PLAN
C400	LANDSCAPE PLAN
C500	CONSTRUCTION DETAILS
C501	CONSTRUCTION DETAILS

OWNER:
DSI PROPERTIES IOWA, LLC
15092 40TH AVENUE NORTH
PLYMOUTH, MN 55446

CIVIL ENGINEER:

SHIVE-HATTERY, INC.
4125 WESTOWN PARKWAY, SUITE 100
WEST DES MOINES, IA 50266
(515) 223-8164
ATTN: BRENT STRAUCH, PE
BSTRAUCH@SHIVE-HATTERY.COM

LEGAL DESCRIPTION:
HUXLEY DEVELOPMENT CORPORATION PLAT 3, LOT 1

SETBACK REQUIREMENTS:
- 20' FRONT SETBACK
- 10' SIDE/REAR SETBACK
- 5' PARKING SETBACK

ZONING:
A - AGRICULTURE

PARKING SUMMARY:

PARKING REQUIRED
1 SPACE / 300 SF - OFFICE SPACE — 1,100 SF = 4 SPACES
1 SPACE / 5,000 SF - WAREHOUSE SPACE — 6,526 = 2 SPACES

TOTAL PARKING REQUIRED — 6 SPACES (1 ACCESSIBLE)

TOTAL PARKING PROVIDED — 6 SPACES (1 ACCESSIBLE)

PROJECT DATA:

PROPOSED SITE CALCULATIONS

IMPERVIOUS AREA = 71,694 SF (77.8%)
PERVIOUS AREA = 20,489 SF (22.2%)

TOTAL DISTURBED AREA = 92,375 SF (2.12 ACRES)

TOTAL LOT AREA = 95,602 SF (2.20 ACRES)

BUILDING USE - SINGLE STORY WAREHOUSE/OFFICE SPACE - TOTAL BUILDING = 7,716 SF

VICINITY MAP:
NOT TO SCALE

NORTH

0 50 100 200
SCALE IN FEET

GENERAL NOTES

1. THE LOCATIONS OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS PLOTTED ON THIS DRAWING ARE APPROXIMATE ONLY AND WERE OBTAINED FROM RECORDS MADE AVAILABLE TO SHIVE-HATTERY, INC. THERE MAY BE OTHER EXISTING UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS NOT KNOWN TO SHIVE-HATTERY, INC. AND NOT SHOWN ON THIS DRAWING. THE VERIFICATION OF EXISTENCE OF, AND THE DETERMINATION OF THE EXACT LOCATION OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR(S).
2. NOTIFY UTILITY COMPANIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN CONSTRUCTION LIMITS OF THIS SCHEDULE PRIOR TO EACH STAGE OF CONSTRUCTION.
3. IOWA CODE 480 UNDERGROUND FACILITIES INFORMATION. REQUIRED VERBAL NOTICE TO IOWA ONE CALL 1-800-292-8989, NOT LESS THAN 48 HOURS BEFORE EXCAVATING, EXCLUDING WEEKENDS AND HOLIDAYS.
4. THE MEANS OF THE WORK AND THE SAFETY OF THE CONTRACTOR'S EMPLOYEES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
5. NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION FROM THE OWNER'S REPRESENTATIVE.
6. PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
7. MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.
8. SITE CLEANUP SHALL BE PERFORMED ON A DAILY BASIS. SIDEWALKS, PARKING LOTS, ROADWAYS, ETC. SHALL BE KEPT CLEAN AT ALL TIMES.
9. ALL OPEN EXCAVATIONS SHALL BE PROTECTED.
10. REPLACE ANY PROPERTY MONUMENTS REMOVED OR DESTROYED BY CONSTRUCTION. MONUMENTS SHALL BE SET BY A LAND SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF IOWA.
11. CONTROL DUST SPREADING FROM ALL WORK AND STAGING AREAS.
12. ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THE COMPLETION OF THE WORK.
13. REPAIR OR REPLACE EXISTING FACILITIES (CURBS, PAVEMENT, PAVEMENT MARKINGS, UTILITIES, ETC.) TO REMAIN AT NO ADDITIONAL EXPENSE TO THE OWNER.
14. WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSE, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER AS REQUIRED BY SHIVE-HATTERY, INC. AT THE CONTRACTOR'S EXPENSE. WORK DONE CONTRARY TO THE INSTRUCTIONS OF THE OWNER'S REPRESENTATIVE, WORK DONE BEYOND THE LINES SHOWN ON THE PLANS OR ANY EXTRA WORK DONE WITHOUT AUTHORITY WILL NOT BE PAID FOR.
15. ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
16. NOTE ALL DIMENSIONS REQUIRED TO CONSTRUCT IMPROVEMENTS ARE SHOWN ON THE DRAWINGS.
17. EROSION CONTROL MEASURES SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION TO MEET REQUIREMENTS OF ALL REGULATORY AGENCIES.
18. CONTRACTOR TO COORDINATE ANY GRADE ADJUSTMENTS WITH THE DESIGN ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
19. NO PONDING OF WATER WILL BE ACCEPTED ADJACENT TO OR ON ANY NEW PAVEMENT AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY ANY AREAS OF EXISTING OR PROPOSED PAVEMENTS THAT HAVE POTENTIAL TO POND WATER AND MAKE ANY ADJUSTMENTS NECESSARY TO ENSURE THAT WATER WILL POSITIVELY DRAIN ACROSS THE PAVING OR OVERLAY.
20. STAGING LOCATION FOR CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER.
21. CONTRACTOR RESPONSIBLE FOR COORDINATING AND MINIMIZING DISTURBANCES THROUGHOUT CONSTRUCTION TO ACCOMMODATE EXISTING TRAFFIC FLOW, COORDINATE STAGING AND SCHEDULE OF IMPROVEMENTS WITH THE OWNER'S REPRESENTATIVE. OWNER'S RESERVES THE RIGHT TO LIMIT CONSTRUCTION WORK AREA AS NEEDED TO FACILITATE OPERATIONS.
22. REMOVAL AND REPLACEMENT OF PAVEMENT SHALL BE DONE ON FULL OR HALF PANELS, RELATIVE TO THE NEAREST JOINT. AREAS TO BE REMOVED SHALL BE VERIFIED IN THE FIELD BY ENGINEER.
23. ALL DISTURBED AREAS SHALL BE RESTORED BY SEEDING.
24. ANY AMENDMENTS OR CHANGES TO THIS PROJECT SITE THAT DO NOT MEET WHAT IS SHOWN ON THE SITE PLAN NEED TO BE APPROVED WITH THE PERMIT AND DEVELOPMENT CENTER PRIOR TO INSTALLATION/CONSTRUCTION.
25. THIS SITE SHALL BE MAINTAINED IN COMPLIANCE WITH ALL CITY CODE APPLICABLE ON THE DATE OF SITE PLAN APPROVAL.
26. A DRIVE APPROACH PERMIT WILL BE REQUIRED.
27. WORK TO BE DONE IN THE RIGHT-OF-WAY SHALL REQUIRE A RIGHT-OF-WAY PERMIT.
28. ALL PRIVATE WATER AND SEWER SERVICES MUST MEET UNIFORM PLUMBING CODE (UPC) AND ALL CITY OF DES MOINES AMENDMENTS TO UPC. MEP PROPER / CONTRACTOR IS RESPONSIBLE FOR VERIFYING PIPE MATERIAL REQUIREMENTS PRIOR TO CONSTRUCTION.
29. ANY NEW ROOFTOP MECHANICAL EQUIPMENT MUST BE SCREENED FROM THE STREET LEVEL VIEW.
30. TRANSFORMERS, JUNCTION BOXES, AIR CONDITIONERS OVER 3 FEET IN HEIGHT, OR OTHER SUCH ITEMS MAY NOT BE LOCATED IN THE REQUIRED SETBACK AREAS.
31. LIGHTING MUST BE LOW-GLARE CUT-OFF TYPE FIXTURES TO REDUCE THE GLARE OF LIGHT POLLUTION ON SURROUNDING PROPERTIES.
32. THE REQUIRED LANDSCAPING, BOTH EXISTING AND PROPOSED, SHALL BE MAINTAINED FOR THE LIFE OF THE CERTIFICATE OF OCCUPANCY.
33. ALL DISTURBED AREAS SHOULD BE RESTORED BY SEEDING OR SODDING.
34. CONTRACTOR IS TO COMPLETE THE DES MOINES WATER WORKS APPLICATION FOR NEW WATER SERVICE.
35. CONTRACTOR IS TO COMPLETE THE DES MOINES GRADING PERMIT PRIOR TO EARTH DISTURBING ACTIVITIES.
36. PARKING LOT LIGHTING SHALL BE PEDESTRIAN SCALE PARKING POLES NO TALLER THAN 20 FEET WITH CUT-OFF DOWN DIRECTIONAL LIGHT FIXTURES. THIS SHALL BE CLEARLY NOTED ON SITE PLAN.

LEGEND

	EXISTING	PROPOSED
SANITARY MANHOLE		
CLEANOUT		
STORM MANHOLE		
ELECTRIC TRANSFORMER		
TELEPHONE PEDESTAL		
FIRE HYDRANT		
WATER VALVE		
CORPORATION STOP		
FLARED END SECTION		
LIGHT POLE		
BOLLARD		
DECIDUOUS TREE		
UNDERGROUND TELEPHONE	T	
UNDERGROUND ELECTRIC	E	E
UNDERGROUND FIBER OPTIC		
GAS MAIN	G	G
WATER MAIN	W	W
SANITARY SEWER	S	S
STORM SEWER		
CHAINLINK FENCE		
10" PCC PAVING		
6" PCC PAVING		
5" PCC SIDEWALK		
CLASS D EROSION STONE		
GRANULAR SURFACING		
ROCK MAINTENANCE SAND		

THE MOST RECENT EDITION OF THE IOWA STATEWIDE URBAN DESIGN SPECIFICATIONS FOR PUBLIC IMPROVEMENTS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED AND THE PROFESSIONAL ENGINEER UNDER WHOSE DIRECT SUPERVISION IT WAS PREPARED IS A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

SIGNATURE: _____ DATE: _____

PRINTED OR TYPED NAME: BRENT MICHAEL STRAUCH
LICENSE NUMBER: 24125
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2020
PAGES OR SHEETS COVERED BY THIS SEAL: ALL C SHEETS

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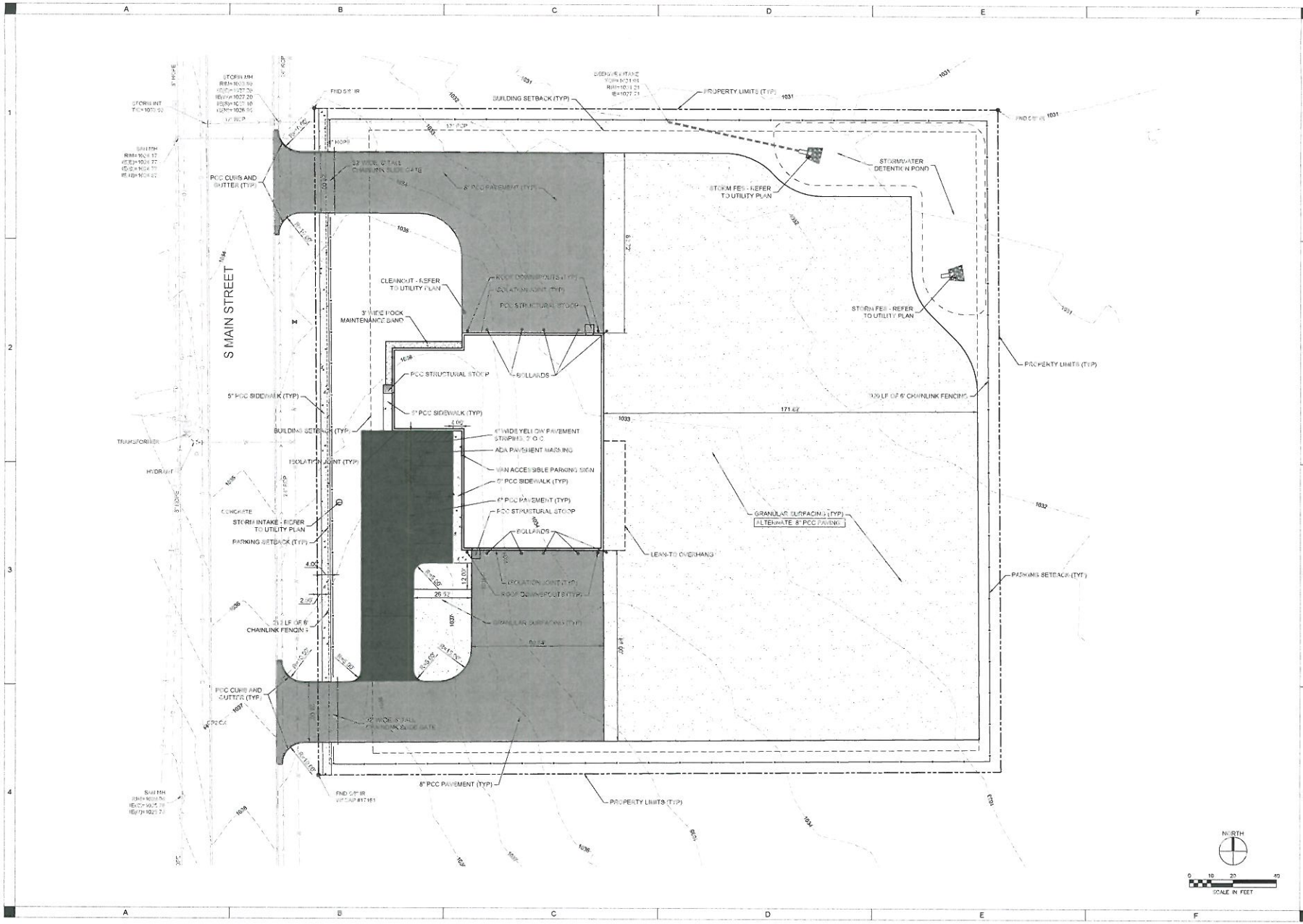
HENNING COMPANIES
S MAIN AVE, HUXLEY, IA 50124

PRELIMINARY - NOT FOR CONSTRUCTION

02/14/2020
CITY REVIEW
PROJECT NO: 4194980
CLIENT NO: –

C000



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APPROVED:	BMS
ISSUED FOR:	CITY REVIEW
DATE:	02/14/2020
PROJECT NO:	4194480
FIELD BOOK:	–
CLIENT NO:	–

SITE PLAN

C100

GRADING PLAN

C200

DRAWN	RRW
APPR. DESIGN	BHS
IS-SUED FOR	CITY REVIEW
DATE	02/14/2023
PROJECT NO.	419-0180
FIELD BOOK	–
CLIENT NO.	–

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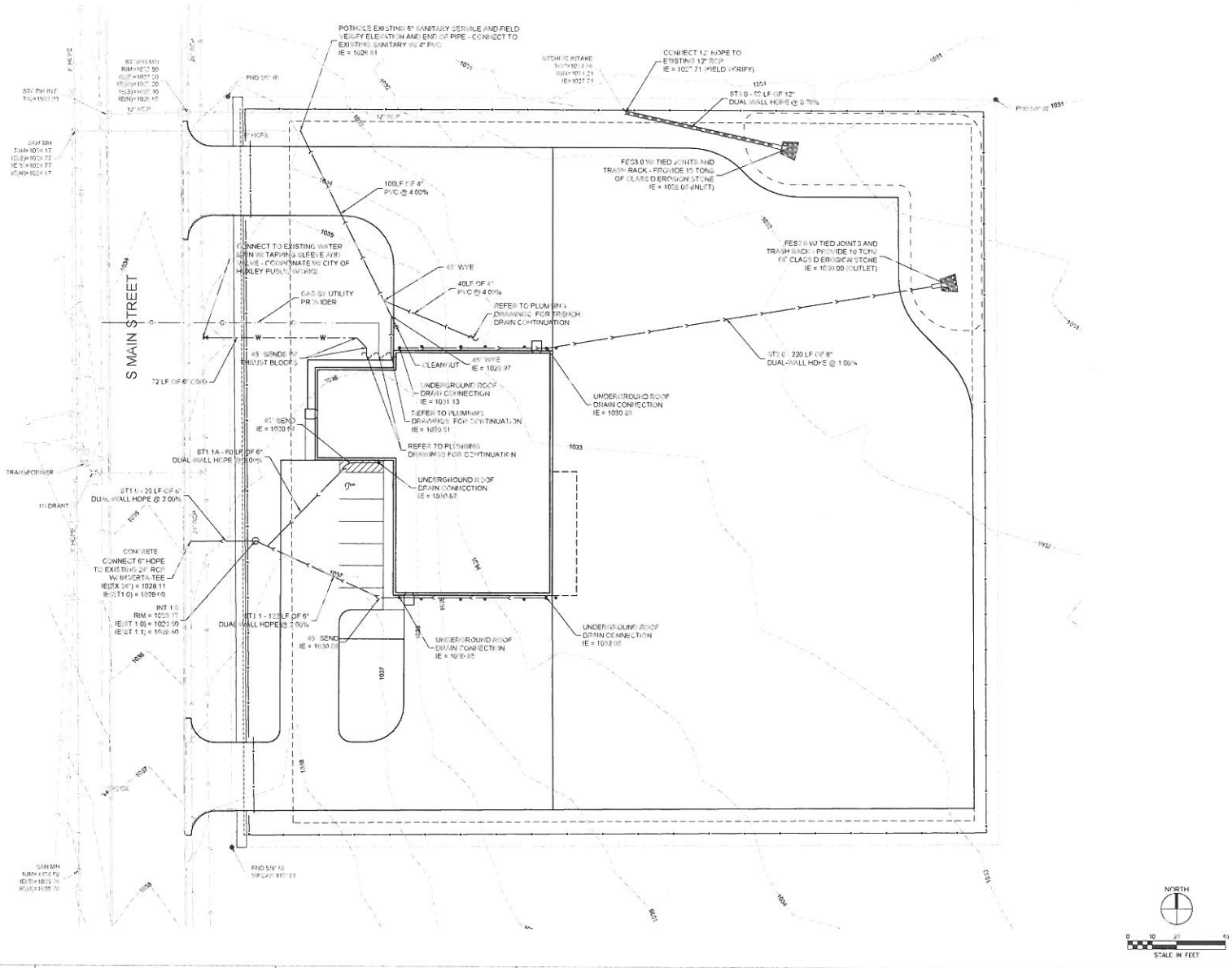

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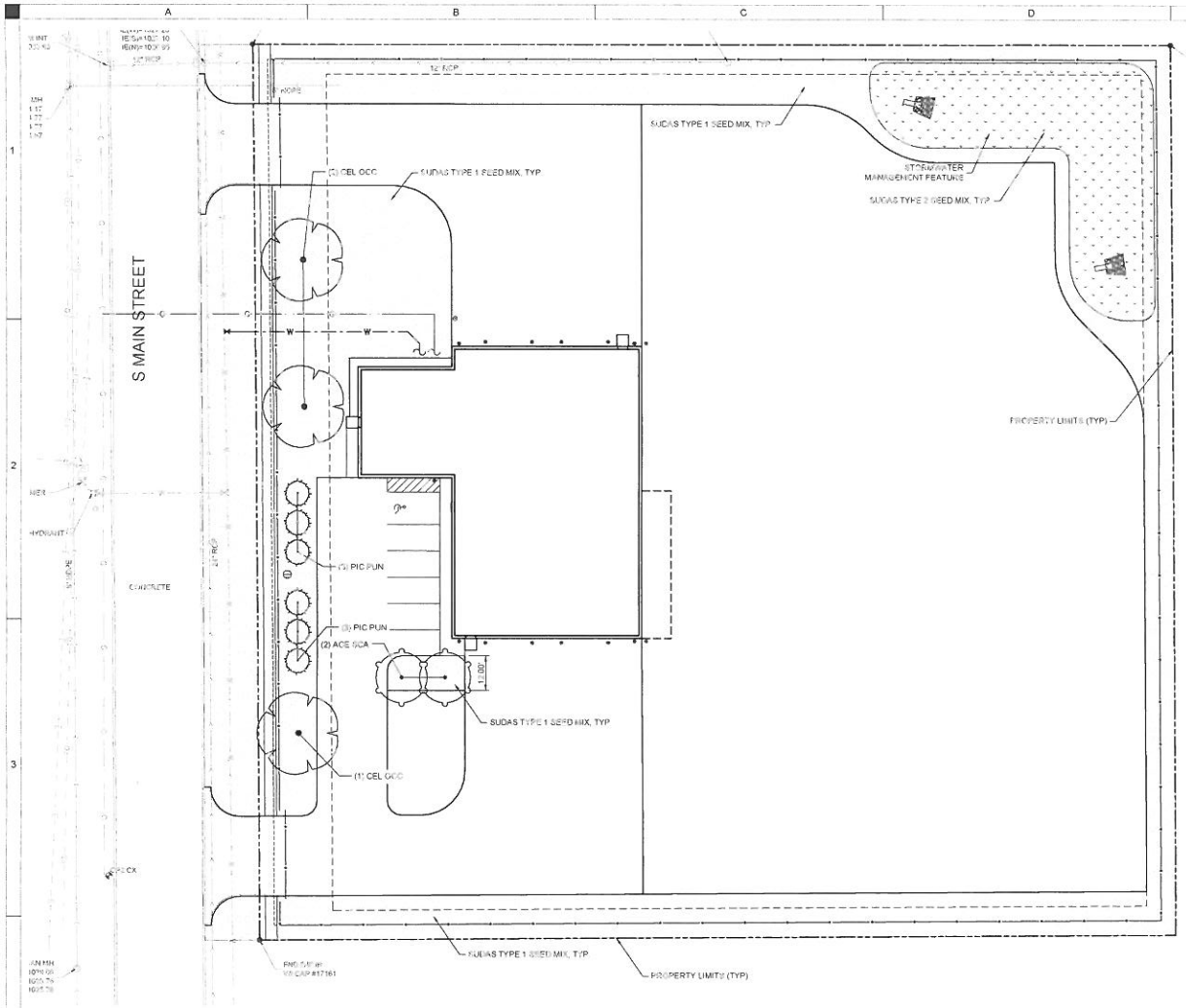
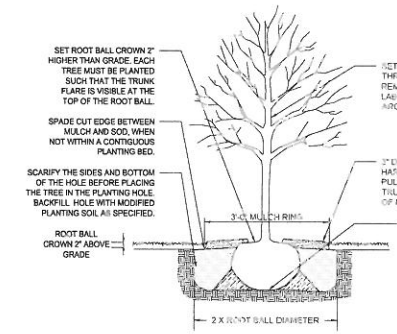
ISSUED FOR	CITY REVIEW
DATE	02/14/2020
PROJECT NO.	4194960
FIELD BOOK	—
CLIENT NO.	—

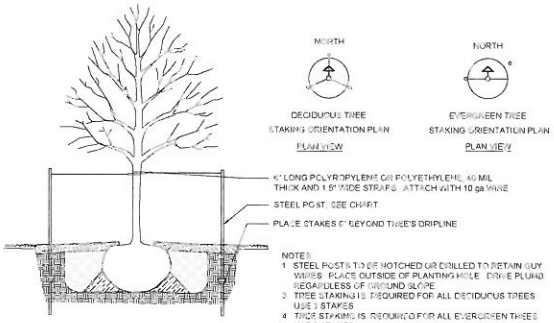
UTILITY PLAN

C300



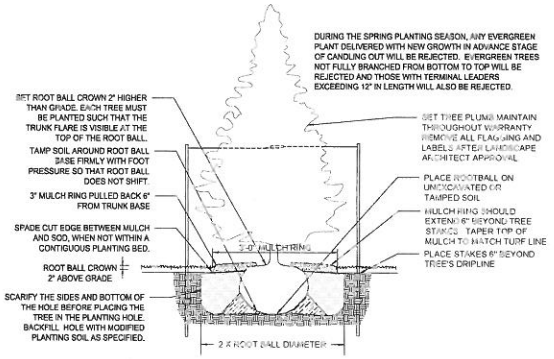


1 DECIDUOUS TREE PLANTING
NTS



NOTES:
1 STEEL POSTS TO BE NOTCHED OR DRILLED TO RETAIN GUY WIRES. PLACE OUTSIDE OF PLANTING HOLE. DRIVE PLUMB REGARDLESS OF GROUND SLOPE.
2 TREE STAKING IS REQUIRED FOR ALL DECIDUOUS TREES. USE 3 STAKES
3 TREE STAKING IS REQUIRED FOR ALL EVERGREEN TREES. USE 2 STAKES
4 REMOVE WITHIN 1 YEAR

2 TREE STAKING DETAIL
NTS



3 CONIFEROUS TREE PLANTING
NTS

PLANT SCHEDULE

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE
ACE SCA	2	Acer x fremanii 'Sienna'	Scarlet Sienna Maple	B & B	1.5" Cal
CEL OCC	3	Celtis occidentalis	Common Hackberry	B & B	1.5" Cal

EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE
PIC PUN	6	Picea pungens 'Fat Albert'	Colorado Spruce	B & B	6' HT

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
SUD TY1	24,628 sf	SUDAS Type 1 Seed Mixture	Permanent Lawn Mix	SF	
SUD TY2	4,300 sf	SUDAS Type 2 Seed Mixture	Permanent Cool Season Mixture	SF	

LANDSCAPE NOTES:

1 ALL TREES SHALL BE PER THE RECOMMENDATIONS AND REQUIREMENTS OF THE CURRENT ANSI "AMERICAN STANDARDS FOR NURSERY STOCK"
2 PROTECT ALL EXISTING AND NEW STRUCTURES AND UTILITY SERVICES DURING INSTALLATION OF ALL PLANT MATERIAL. NOTIFY ENGINEER IMMEDIATELY UPON CONFLICT OF PLANTS, STRUCTURES, AND UTILITIES
3 REPAIR ALL AREAS OF DISTURBANCE WITH TURF SEED UNLESS NOTED OTHERWISE
4 ISLANDS SHALL BE CORED OUT TO REMOVE ALL GRANULAR AND COMPACTED SUBBASE TO A DEPTH OF 36" BELOW FINISH PAVING SURFACE

NORTH
0 10 20 40
SCALE IN FEET

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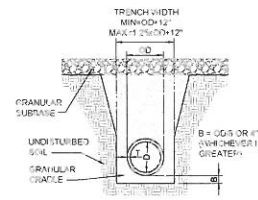
DRAWN EDR
APPROVED BMB
ISSUED FOR CITY REVIEW
DATE 02/14/2020
PROJECT NO. 4194960
FIELD BOOK -
CLIENT NO. -

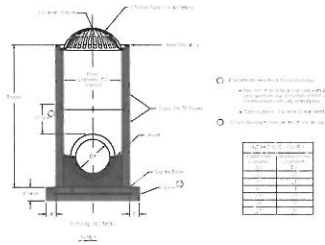
LANDSCAPE PLAN

C400

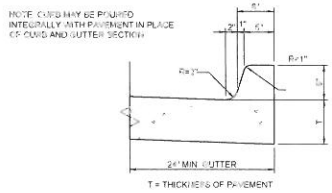


NOTE: SUBGRADE SHOULD BE EXCAVATED OR OVER EXCAVATED, IF NECESSARY, SO A UNIFORM FOUNDATION FREE OF PROTRUDING ROCKS MAY BE PROVIDED

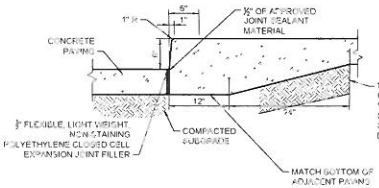
12 RIGID PIPE EXCAVATION & BEDDING
NOT TO SCALE



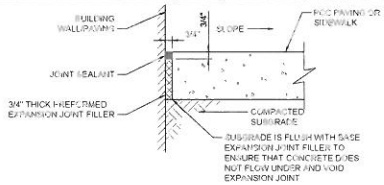
9 AREA INTAKE (SW-512)
NOT TO SCALE



6 PCC CURB AND GUTTER
NOT TO SCALE

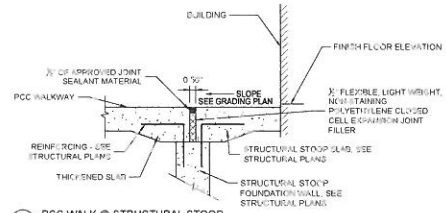


4 INTEGRAL PCC CURB AND SIDEWALK
NOT TO SCALE

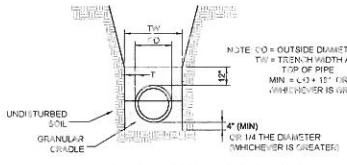


NOTE
ALL PREFORMED JOINT MATERIAL SHALL BE INSTALLED PERPENDICULAR TO THE PAVEMENT SURFACE AND CARE SHALL BE EXERCISED THROUGHOUT THE CONSTRUCTION OF THE PAVEMENT TO ENSURE THAT SUCH JOINT MATERIAL REMAINS IN PROPER POSITION UPON COMPLETION OF PAVING OPERATION

5 ISOLATION JOINT
NOT TO SCALE

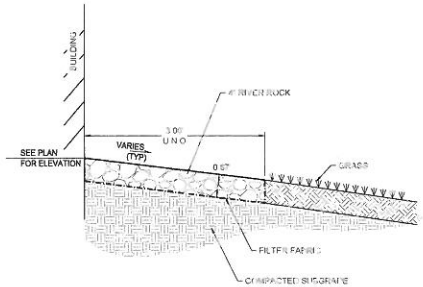


3 PCC WALK @ STRUCTURAL STOOP
NOT TO SCALE

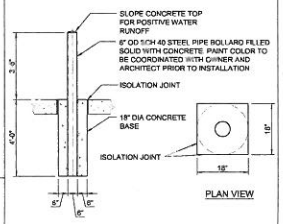


SUBGRADE SHOULD BE EXCAVATED OR OVER EXCAVATED, IF NECESSARY, SO A UNIFORM FOUNDATION FREE OF PROTRUDING ROCKS MAY BE PROVIDED

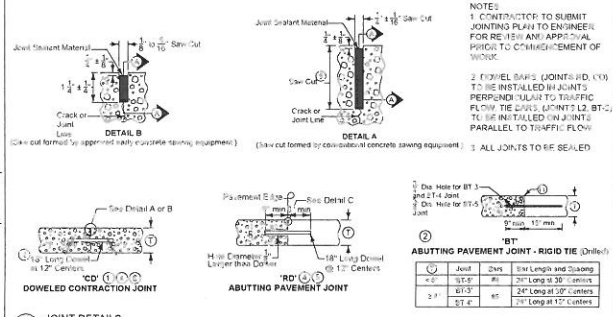
11 FLEXIBLE PIPE BEDDING
NOT TO SCALE



8 GRANULAR MAINTENANCE BAND
NOT TO SCALE



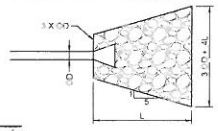
4 SECURITY BOLLARD
NOT TO SCALE



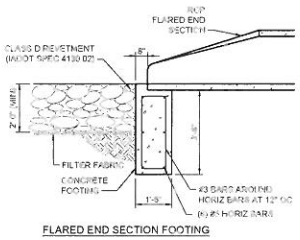
NOTES
1. CONTRACTOR TO SUBMIT JOINTING PLAN TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
2. DOWEL BARS (JOINTS RD, CD) TO BE INSTALLED IN JOINTS PERPENDICULAR TO TRAFFIC FLOW. TIE BARS (JOINTS L2, BT-2) TO BE INSTALLED ON JOINTS PARALLEL TO TRAFFIC FLOW.
3. ALL JOINTS TO BE SEALED

	Joint	Dwg	Bar Length and Spacing
	5'-5"	#6	24" Long at 30" Centers
	6'-5"		24" Long at 30" Centers
≥ 3'	5'-4"	#5	24" Long at 12" Centers

2 JOINT DETAILS
NOT TO SCALE

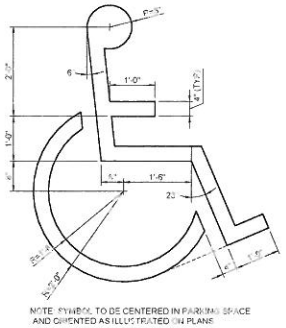


RIP-RAP DETAIL



FLARED END SECTION FOOTING

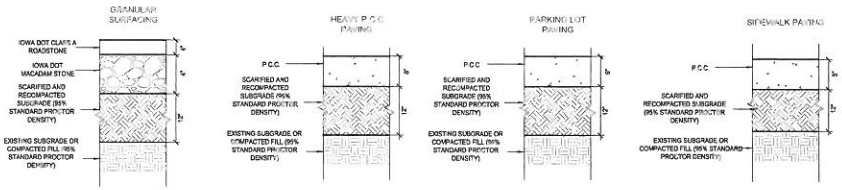
10 FLARED END SECTION
NOT TO SCALE



NOTE: SYMBOL TO BE CENTERED IN PARKING SPACE AND PAINTED AS ILLUSTRATED ON PLANS

7 HANDICAPPED PARKING SYMBOL
NOT TO SCALE

NOTE
SUBGRADE PREPARATION SHALL EXTEND 24" BEYOND EDGE OF PAVING



1 PAVEMENT AND SURFACING CROSS SECTIONS
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DRAWN	KRW
APPROVED	BMS
ISSUED FOR	CITY REVIEW
DATE	02/14/2020
PROJECT NO.	419/480
FIELD BOOK	—
CLIENT NO.	—

CONSTRUCTION DETAILS

C500

SPECIFICATIONS

THE MOST RECENT EDITION OF THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SHALL APPLY TO ALL SITE WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.

A. CONCRETE PAVING:
CONCRETE MATERIALS AND MIXING FOR ALL CONCRETE WORK UNLESS OTHERWISE SPECIFIED, SHALL CONFORM TO IOWA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, SECTION 2301.01 THROUGH 2301.10 AND MATERIALS 1.4 539 FOR AIR-ENTRAINED TYPE C-4 MIX WITH TYPE I CEMENT. MIX-MAX MAY NE SUBSTITUTED WITH APPROVAL OF ENGINEER.

COARSE AGGREGATE DURABILITY SHALL BE CLASS II

COMPRESSIVE STRENGTH: 3000 PSI @ 7 DAYS AND 4000 PSI @ 28 DAYS

SLUMP: 3" ± 1"

AIR CONTENT: 7.0% ± 1.5%

TESTING - ONE SET OF TEST CYLINDERS REQUIRED FOR EACH 100 C.Y. OR ONE PER DAY IF LESS THAN 100 CY FROM SAME READY MIX PLANT. CONCRETE TESTING TO BE COMPLETED BY AN INDEPENDENT TESTING LABORATORY AND PAID FOR BY CONTRACTOR. CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL REQUIRED TESTING AND GEOTECHNICAL WORK. SUBMIT ALL REPORTS TO THE ENGINEER.

SURFACE CURING: CONTRACTOR SHALL APPLY WHITE PIGMENT LIQUID CURING COMPOUND IN A FINE SPRAY TO FORM CONTINUOUS UNIFORM FILM AFTER FINISHING AND SURFACE MOISTURE HAS DISAPPEARED, OR WITHIN 30 MINUTES OF PLACEMENT.

SUBMIT CONCRETE MIX DESIGN TO ENGINEER FOR APPROVAL.

B. SEALANTS:
JOINT SEALERS: ALL JOINTS TO BE SEALED. MEET IOWA DOT STANDARD SPECIFICATION REQUIREMENTS INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

C. PAVEMENT MARKING:
FACTORY MIXED, QUICK DRYING, NON-BLEEDING, WATERBORNE PAINT COMPLYING WITH IOWA DOT STANDARD SPECIFICATION (SECTION 4183). COLOR: YELLOW. WIDTH: 4". SUBMIT TO ENGINEER FOR APPROVAL.

D. REINFORCING STEEL:
PAVING REINFORCEMENT SHALL BE ASTM A615 GRADE 60, AND SHALL HAVE A PROTECTIVE COATING OF EPOXY APPLIED BY ELECTROSTATIC SPRAY METHOD IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A775.

E. SUBGRADE / SUBBASE:
WHEN UNSTABLE MATERIAL OR EXCESSIVE MOISTURE IS ENCOUNTERED, THE ENGINEER MAY ORDER REMOVAL AND REPLACEMENT OF THE UNSTABLE MATERIAL. REMOVE EXISTING UNSTABLE SUBGRADE OR SUBBASE, OR BOTH, TO THE DEPTH DIRECTED BY THE ENGINEER. PLACE AND COMPACT NEW SUBBASE MATERIAL AS REQUIRED TO BRING THE SUBBASE TO A LEVEL 1 INCH BELOW THE BOTTOM OF THE EXISTING PAVEMENT.

F. SEEDING:
SEED ALL AREAS DISTURBED BY CONSTRUCTION.

G. TRAFFIC AND PEDESTRIAN CONTROL:
PROVIDE BARRICADES, FENCING, AND OTHER DEVICES TO KEEP UNAUTHORIZED PERSONNEL FROM PROJECT SITE AND WORK ZONES AND TO DIRECT TRAFFIC AROUND EXISTING SITE.

KEEP INTERFERENCE WITH TRAFFIC TO A MINIMUM. DO NOT BLOCK EXISTING DRIVE AISLES OR ENTRANCE DRIVES.

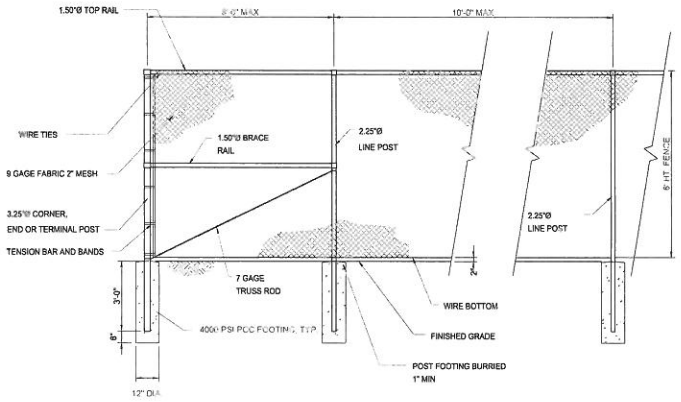
PROVIDE OWNERS REPRESENTATIVE WITH A CONSTRUCTION STAGING PLAN SHOWING CONSTRUCTION SEQUENCING, STAGING AREAS, AND ALL ACCESS ROUTES.

H. PAVEMENT JOINTING:
SEAL ALL JOINTS

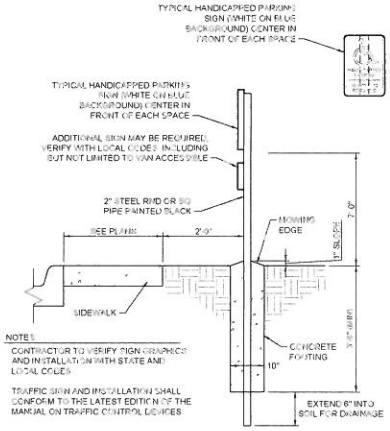
GRADING AND EROSION CONTROL NOTES:

1. BEST MANAGEMENT PRACTICES (BMPS) AND CONTROLS SHALL CONFORM TO THE LATEST EDITION OF SUDAS AND ISWMM. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
2. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL.
3. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
4. SUFFICIENT OIL AND GREASE ABSORBENT MATERIALS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
5. 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.
6. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
7. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
8. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
9. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
10. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCE, WATTLES, INLET PROTECTION, ETC.) TO PREVENT EROSION.
12. ALL STORM SEWER INTAKES THAT RECEIVE STORMWATER RUNOFF FROM DISTURBED AREAS SHALL BE PROVIDED WITH A FILTER SACK.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, PERIODIC CHECKING AND REINSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES.
14. OWNER SHALL ASSUME RESPONSIBILITY FOR ALL EROSION CONTROL UNTIL DELEGATED TO CONTRACTOR ONCE THE PROJECT CONSTRUCTION STARTS.
15. PROTECT BIORETENTION SWALE FILTRATION SOIL AND AGGREGATE MATERIALS FROM EROSION OFF ADJACENT GRADES. REMOVE ALL ACCUMULATED SEDIMENT FROM SWALE EXCAVATION AND PLACED FILTRATION MATERIALS PRIOR TO PLACING THE NEXT LAYER OF BACKFILL. MINIMIZE COMPACTION OF THE SWALE SUBGRADE BY PLACING FILTRATION MATERIALS FROM SWALE SIDES SLOPES AND SPREADING WITH BACKHOE BUCKET OR TRACKED, LOW GROUND PRESSURE VEHICLES ONLY. VEHICLE TRAVEL OVER PLACED FILTRATION SOIL IS PROHIBITED. INSTALL EROSION CONTROL MEASURES AS NEEDED DURING RESTORATION SEEDING AFTER SEEDING ESTABLISHMENT PERIOD TO PREVENT SEDIMENTATION OF SWALE BOTTOM AND WASHOUT OF SEED AND MULCH MATERIALS.

NOTE: FENCE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL FENCE AND GATE TYPES INCLUDING ALL REQUIRED ASSEMBLIES TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY FENCE INSTALLATION.

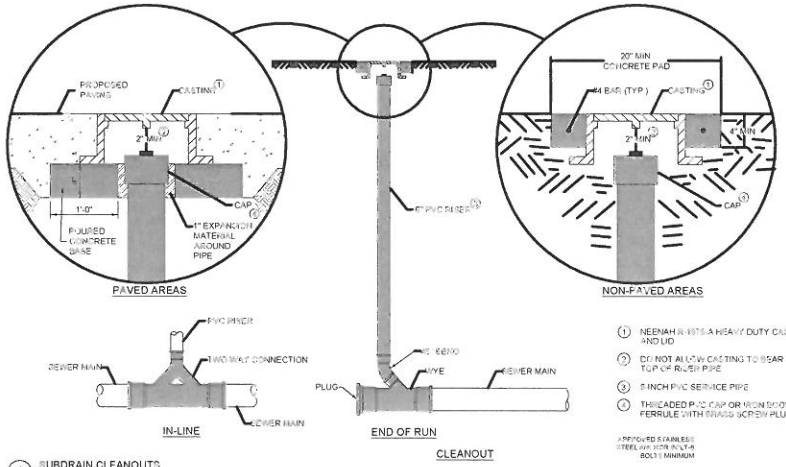


1 6' FENCE DETAIL
NOT TO SCALE



NOTES:
1. CONTRACTOR TO VERIFY SIGN GRAPHICS AND INSTALLATION WITH STATE AND LOCAL CODES.
2. TRAFFIC SIGN AND INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON TRAFFIC CONTROL DEVICES.

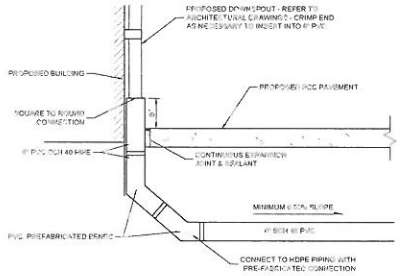
7 HANDICAPPED PARKING SIGN
NOT TO SCALE



1 NEENAH R-1878-A HEAVY DUTY CASTING AND LID
2 DO NOT ALLOW CASTING TO BEAR ON TOP OF RISER PIPE
3 6 INCH PVC SERVICE PIPE
4 THREADED PVC CAP OR IRON BODY FERRULE WITH BRASS SCREW PLUG

APPROVED STAINLESS STEEL AIR VENT & NUT-& BOLTS MINIMUM

1 SUBDRAIN CLEANOUTS
NOT TO SCALE



1 ROOF DRAIN CONNECTIONS
NOT TO SCALE

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
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515 223 8104 | www.shive-hattery.com
Iowa | Illinois | Indiana

DSI HUXLEY

HENNING COMPANIES
S MAIN AVE, HUXLEY, IA 50124

PRELIMINARY - NOT FOR CONSTRUCTION

DRAWN: KRW
APPROVED: BMS
ISSUED FOR: CITY REVIEW
DATE: 02/14/2020
PROJECT NO: 419W80
FIELD BOOK: –
CLIENT NO: –

CONSTRUCTION DETAILS

C501

DIAMOND SURFACE SHOP & OFFICE BUILDING

HUXLEY, IOWA 50124

CODE SUMMARY

DSI-HUXLEY CODE SUMMARY				last updated	01/28/20
Code Referenced	2015 International Building Code (2015 IBC)				
Use & Occupancy Classification [Chapter 3]					
Occupation	Use	Area		Sections	
Paint Shop	F1	6,900 sf		306.2	
Office	B	1,516 sf		304	
Total Building		7,716 sf			
Special Detailed Requirements based on used and occupancy [Chapter 4]					NONE REQUIRED
Allowable Height & Area [Chap 5]	Const. Type	Height (ft)	Stories	Allowable	
F1 (no sprinkler)	V-B (No)	55	2	8,500 sf	COMPLIES
NOT SPRINKLERED		T 504.4	T 504.4	T 506.2 Multiplier	
Mezzanines & Equipment Platforms [§ 505]	no mezzanines planned for the building at this				NA
Mixed Use & Occupancy [Section 508]					
Separation of occupancies (Table 508.4)	No separation is required between accessory occupancies and the main occupancy				COMPLIES
Separation of Occupancies (Table 508.4)	separation between B & F-1				NONE REQUIRED
Incidental Uses [Section 509]	Table 509				NA
Type of Construction [Chapter 6]	Type II-B				
Fire Resistance Ratings [Table 601]	0				
Bearing Walls-Interior	0				COMPLIES
Nonbearing Walls- Interior	0				COMPLIES
Floor Construction & Secondary Struct	0				COMPLIES
Roof Construction & Secondary Struct	0				COMPLIES
Fire & Smoke Protection Features [Chapter 7]					
Fluse Required					NA
Automatic Sprinkler [Section 903.2.9]	none				NA
Portable Fire Extinguishers [Section 906.1]	fire extinguishers required				COMPLIES
Fire Extinguishers [Table 906.3 (1)]	minimum rating		2A		COMPLIES
	max. floor area per unit rating		3,000 sf		COMPLIES
	max. floor area per extinguisher		11,250 sf		COMPLIES
	max. travel distance		75 ft		COMPLIES
Fire Alarm & Detection [Section 907.2]	not required				NA
Occupant Load [Table 1004.1.2]			Calculated		
Classification	V	OL	Occupants		
Paint Shop	6,900	100	69		
Office	1,516	100	32		
Total	7,716		101		
Minimum Egress Width [Section 1005]	Factor	Req'd Provided			
1005.3.1 Other	0.2	19	30 inches		COMPLIES
Fire Exit Hardware [Section 1008]					
§ 1008.1.2 Door Swing	door shall swing in direction of				COMPLIES
§ 1008.1.9.1 Hardware	hardware shall not require tight grasping, pinche				COMPLIES
§ 1008.1.10 Panic & Fire Exit Hardware	panic hardware not required for general				COMPLIES
	required for equipment rooms with equipment in				COMPLIES
Min. Number of Exits [Section 1015]	2	required per floor min			COMPLIES
	3	provided			COMPLIES
Separation of Exits [Section 1017.1]	exits to be separated 1/3 diagonal distance (unless sprinkler)				COMPLIES
§ 1015.2.2 Three or more exits	where more than one exits provided, one shall				COMPLIES
Exit Access Travel Dist. [Table 1016.2]	F1 (sprinkler)		250 ft max		COMPLIES
	with sprinkler system				
Accessibility [Chapter 11]	in accordance with IBC 2012 and ICC/ANSI A117.1				COMPLIES
§ 1105	2	accessible entrance required			COMPLIES
	3	provided			COMPLIES
Plumbing Fixtures [2012 IPC]					
Plumbing fixtures shall be installed and provided for each tenant improvement and not part of					
Minimum fixtures may be provided as follows for yearly area based on occupancy requirements					
Criteria for 3 occupancies					
Toilets/Urinals	1/100				
Lavatories	1/100				
Required number of Fixtures	M	F	Total		
Occupants	30	30	60		
Toilets/Urinals	0.37	0.37			
Lavatories	0.37	0.37			
Criteria for 2 occupancies					
Toilets/Urinals	1/100				
Lavatories	1/100				
Required Number of Fixtures	M	F	Total		
Occupants	6	6	12		
Toilets/Urinals	0.06	0.06			
Lavatories	0.06	0.06			
Total Required fixtures					
Toilets/Urinals	1.00	1.00			
Lavatories	1.00	1.00			
Provided Number of Fixtures					
Toilets/Urinals	2	3			
Lavatories	1	3			

GENERAL NOTES

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]
10. [illegible]
11. [illegible]
12. [illegible]
13. [illegible]
14. [illegible]
15. [illegible]
16. [illegible]
17. [illegible]
18. [illegible]

PROJECT TEAM

OWNER
DIAMOND SURFACE, INC
[illegible]

GENERAL CONTRACTOR
HENNING COMPANIES, LLC
[illegible]

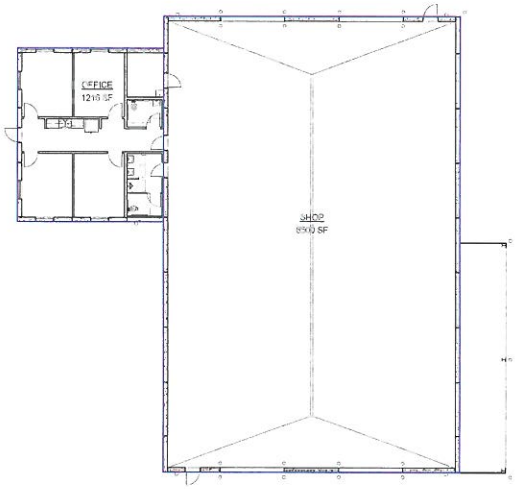
JURISDICTION
CITY OF HUXLEY
[illegible]

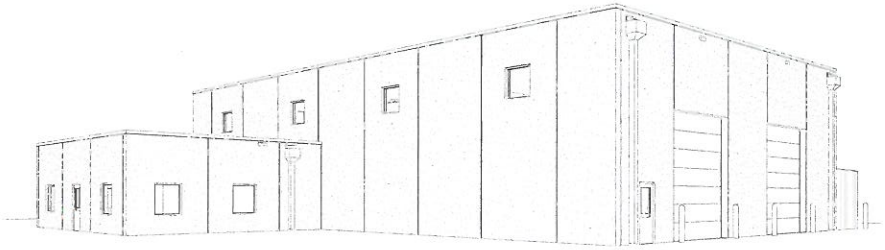
ARCHITECTURAL DESIGN
RAINS ARCHITECTURE, PLLC
[illegible]

CIVIL ENGINEERING
FIVE FATTERY
[illegible]

STRUCTURAL ENGINEERING
RAKER RHODES INDUSTRIAL, LLC
[illegible]

	[illegible]
	[illegible] DATE
	[illegible] 01.31.20





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515-314-9078 jeff@rainsarch.com

RAKER RHODES Engineering
DES MOINES, IOWA www.rakerrhodes.com

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GENERAL
G1 COVER SHEET, CODE SUMMARY

ARCHITECTURAL
A1 FLOOR PLANS
A2 EXTERIOR ELEVATIONS & ROOF PLAN
A3 INTERIOR ELEVATIONS, SCHEDULES
A4 SECTIONS & DETAILS

STRUCTURAL
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S0.2 STRUCTURAL NOTES
S1.1 FOUNDATION PLAN
S2.2 FOUNDATION DETAILS
S3.1 ROOF FRAMING PLAN
S3.2 OH CRANE FRAMING
S4.1 FRAMING DETAILS

DSI Shop & Office
Huxley, IA

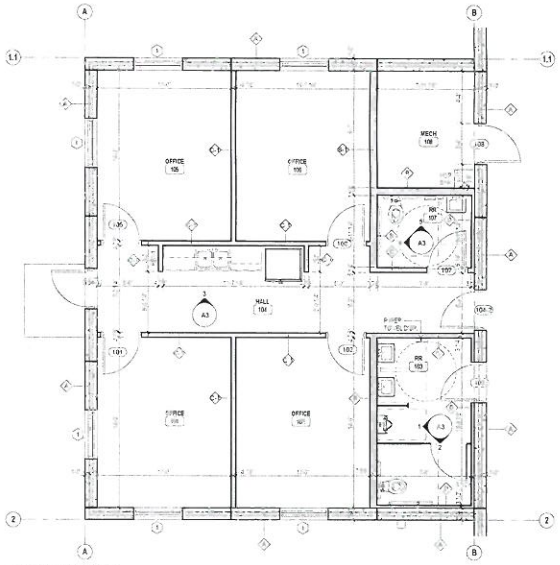
Diamond Surface Inc.

Revisions	

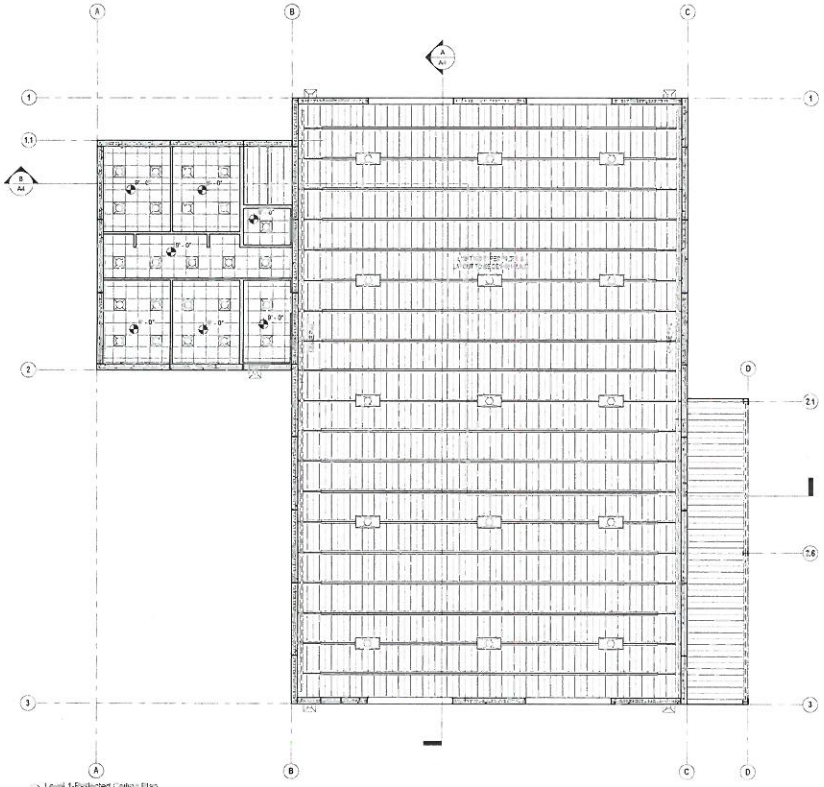
ISSUE 12.31.19 PROJ. RA-19032
COVER SHEET, CODE SUMMARY

2020-02-11 -- FOR REVIEW

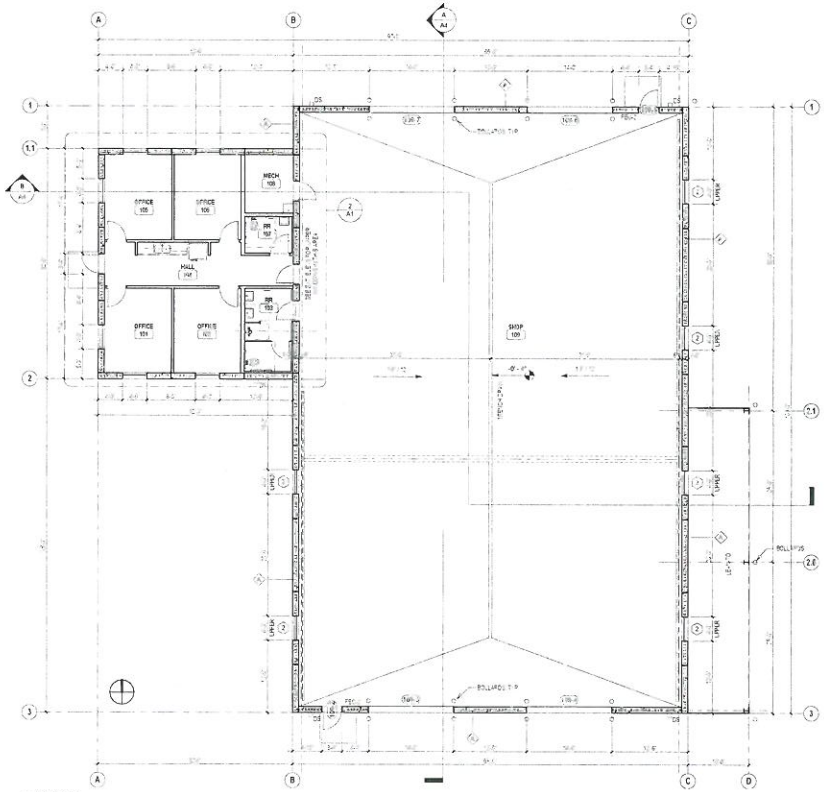
G1



1 Level 1 - Enlarged Office
1/4" = 1'-0"



3 Level 1-Reflected Ceiling Plan
1/8" = 1'-0"



1 Floor Plan
1/8" = 1'-0"

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FLOOR PLANS

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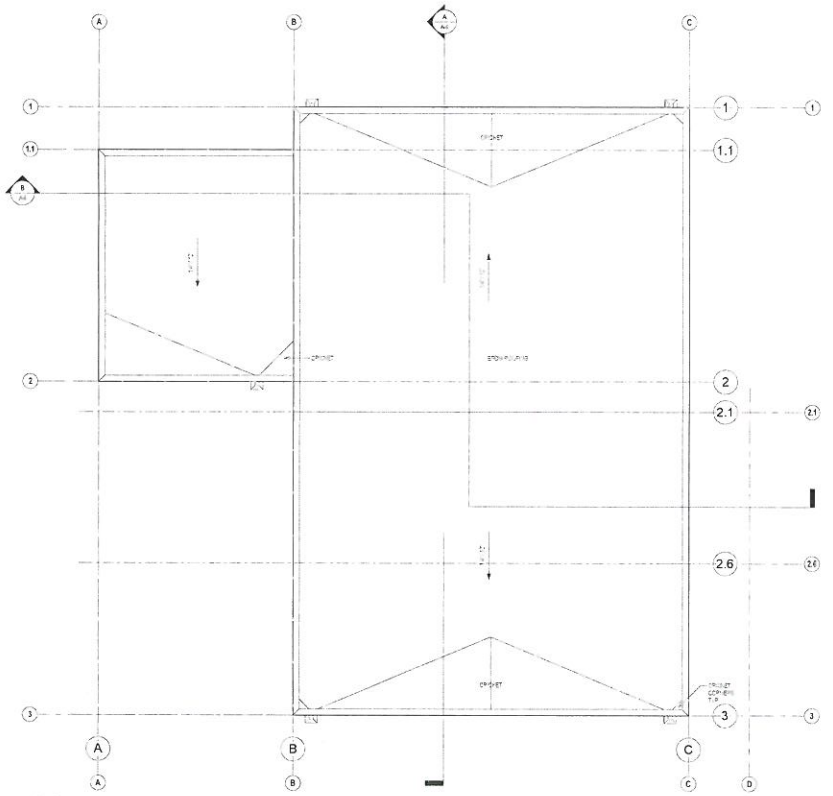
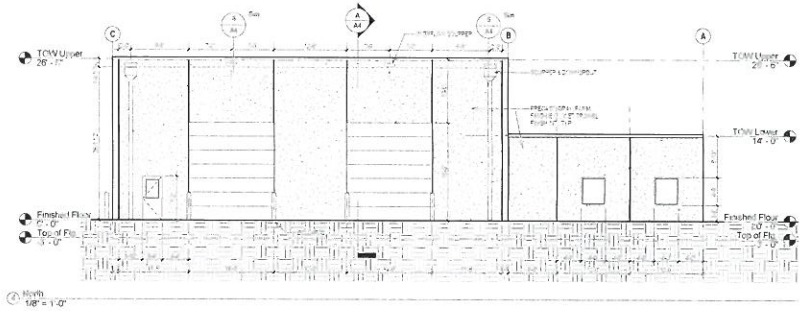
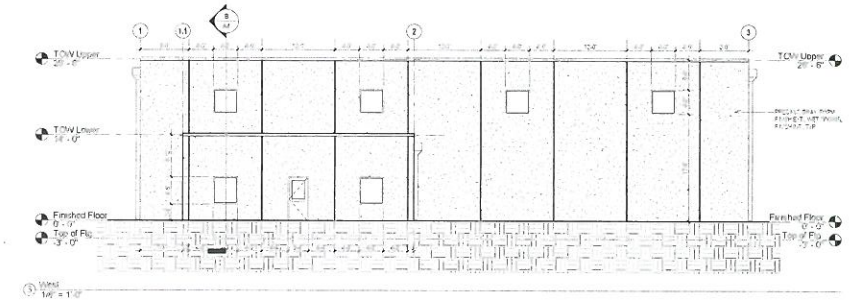
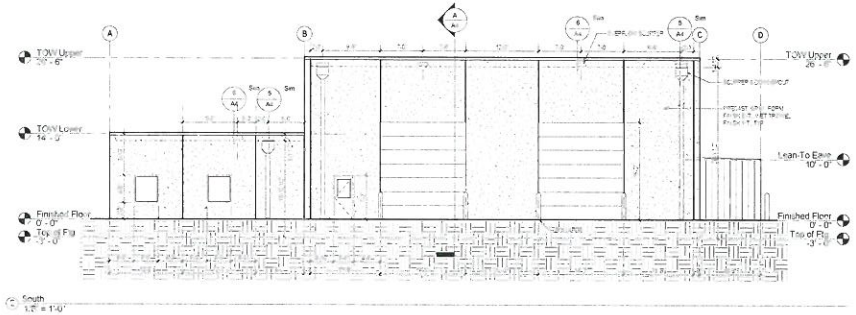
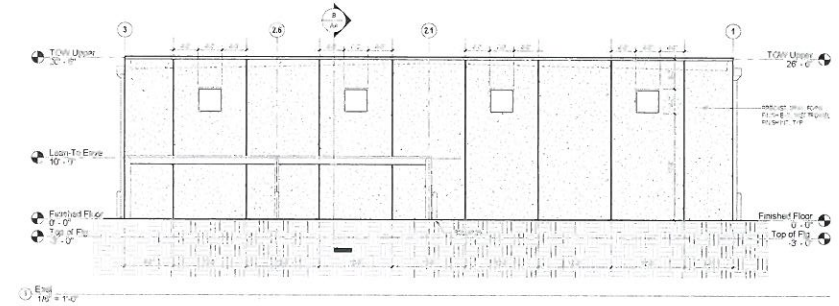
A1











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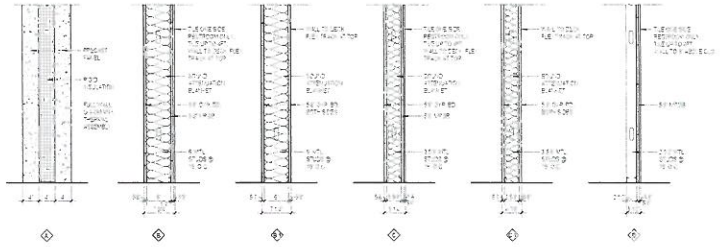
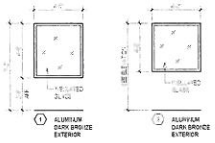
EXTERIOR ELEVATIONS & ROOF PLAN

2020-02-11 -- FOR REVIEW

A2



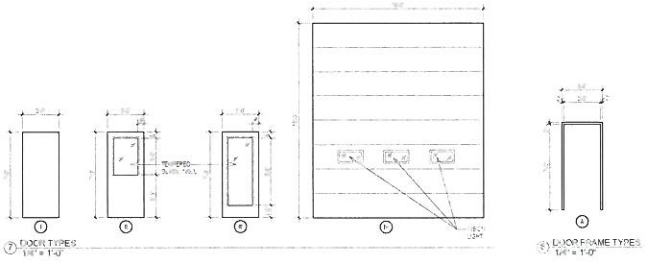
⑤ WALL TYPES
1" = 1'-0"



① ALUMINUM DARK BRONZE EXTERIOR

② ALUMINUM DARK BRONZE EXTERIOR

⑧ WINDOW TYPES
1/4" = 1'-0"



⑦ DOOR TYPES
1/4" = 1'-0"

⑥ DOOR FRAME TYPES
1/4" = 1'-0"

DOOR SCHEDULE

NUMBER	LEAFS	TYPE	WIDTH	HEIGHT	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FIRE RATING	HARDWARE GROUP	COMMENTS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

OPTIONAL PRICING

FINISHES - VERIFY IN SITU

[illegible]

BATHROOM ACCESSORIES - VERIFY IN SITU

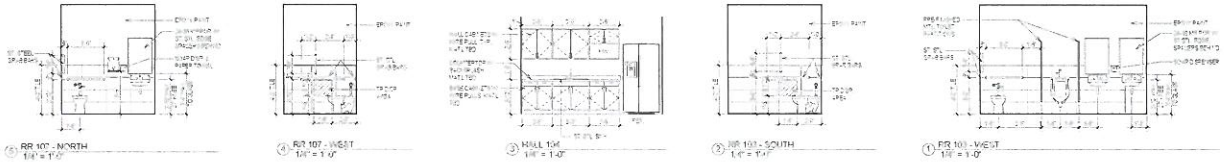
[illegible]

FIRE EXTINGUISHER CABINETS

[illegible]

ROOM FINISH SCHEDULE

No	NAME	FLOOR MATERIAL	BASE MATERIAL	NORTH WALL MATERIAL	NORTH WALL FINISH	SOUTH WALL MATERIAL	SOUTH WALL FINISH	EAST WALL MATERIAL	EAST WALL FINISH	WEST WALL MATERIAL	WEST WALL FINISH	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT	COMMENTS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



⑥ RR 107 - NORTH
1/4" = 1'-0"

④ RR 107 - WEST
1/4" = 1'-0"

③ HALL 104
1/4" = 1'-0"

③ RR 103 - SOUTH
1/4" = 1'-0"

① RR 103 - WEST
1/4" = 1'-0"

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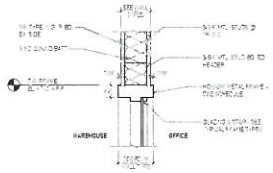
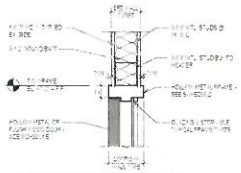
INTERIOR ELEVATIONS, SCHEDULES

2020-02-11 -- FOR REVIEW

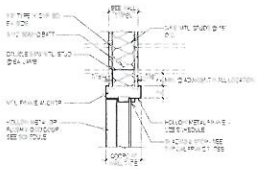
A3



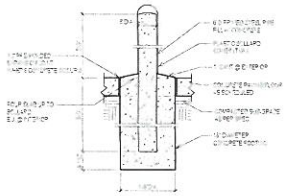
14 H.M. FRAME HEAD @ MTL. STUD WALL
1 1/2" = 1'-0"



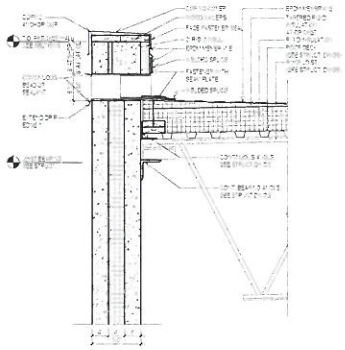
11 H.M. FRAME HEAD @ MTL. STUD WALL
1 1/2" = 1'-0"



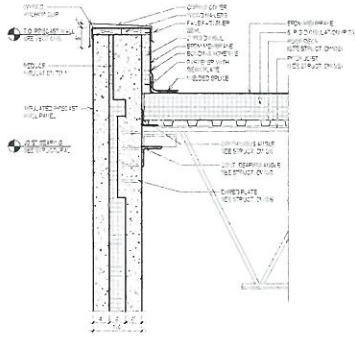
13 H.M. FRAME JAMB @ MTL. STUD WALL
1 1/2" = 1'-0"



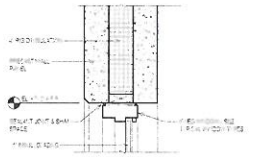
7 PIPE BOLLARD DETAIL
3/4" = 1'-0"



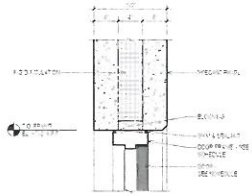
5 OVERFLOW SCUPPER DETAIL
1" = 1'-0"



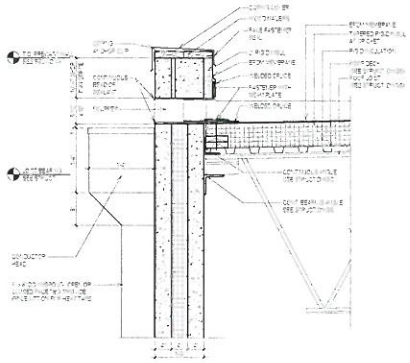
3 WALL PARAPET
1" = 1'-0"



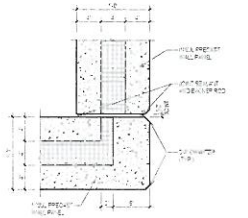
15 WINDOW HEAD @ PRECAST WALL
1 1/2" = 1'-0"



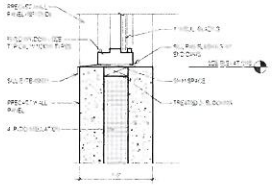
9 H.M. FRAME HEAD @ PRECAST WALL
1 1/2" = 1'-0"



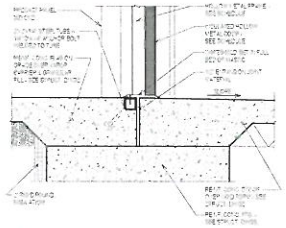
6 SCUPPER DETAIL
1" = 1'-0"



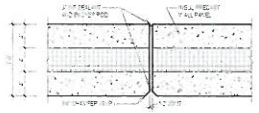
2 PRECAST PANEL CORNER DETAIL
1 1/2" = 1'-0"



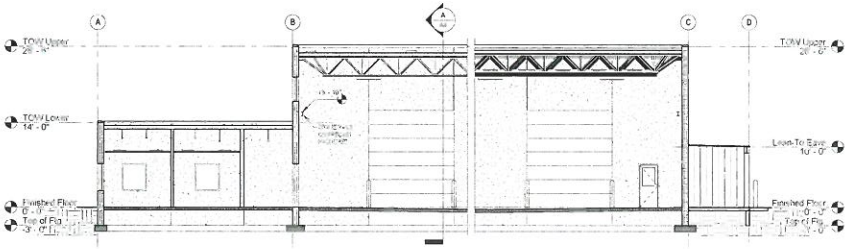
12 WINDOW SILL @ PRECAST WALL
1 1/2" = 1'-0"



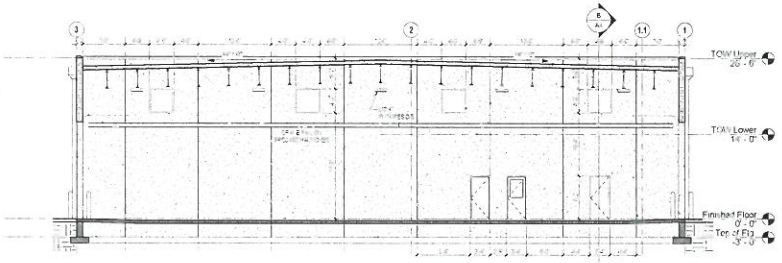
8 H.M. FRAME SILL @ PRECAST WALL
1 1/2" = 1'-0"



1 PRECAST PANEL JOINT DETAIL
1 1/2" = 1'-0"



B Section B
1/8" = 1'-0"



A Section A
1/8" = 1'-0"

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DES MOINES, IOWA www.rakerrhodes.com

DSI Shop & Office
Huxley, IA

Diamond Surface Inc.

Revisions	

ISSUE 01.28.20 PROJ. RA-19032

SECTIONS & DETAILS

2020-02-11 -- FOR REVIEW

A4

Response Letter

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

March 12, 2020

Veenstra & Kimm, Inc.
Attn: Forrest S. Aldrich, P.E.
3000 Westown Parkway
West Des Moines, IA 50266

Re: DSI Huxley – Site Plan Review

Dear Mr. Aldrich,

We are in receipt of your plan review comments for the above referenced project, dated March 10, 2020. Our comments are as follows:

1. Sheet 0000, in General Notes 34 and 35 change to the City of Huxley.
   S-H Response: Note has been updated on Cover Sheet - C000.

2. Provide SDR 23.5 for the sewer service pipe material.
   S-H Response: Update has been made to Utility Plan – C300 for change in pipe material.

3. The detention basin berm should have a side slope of 4:1 or flatter in accordance with SUDAS Design Manual Section 2G-1.F.1.a.
   S-H Response: Slopes of detention basin are updated to meet 4:1 maximum side slope.

4. Label the storm sewer from the public storm sewer on the east side of Main Avenue to the intake as "Private."
   S-H Response: Note has been added to denote private storm sewer.

5. Label the storm sewer from the street manhole to the pond outlet structure as "Private."
   S-H Response: Note has been added to denote private storm sewer.

6. Change street name to S. Main Avenue.
   S-H Response: Update has been made to base file.

7. Provide 5-foot wide sidewalk along the street.
   S-H Response: 4' Sidewalk previously shown has been widened to 5' and moved within City ROW.

8. Provide dimensions for the boundary of the lot.
   S-H Response: Boundary dimensions have been added to base file.

9. Provide calculations showing a minimum of 20% greenspace on the site.
   S-H Response: Greenspace calculations has been added to Cover Sheet – C000.

Project 4193880

10. Provide all final as-constructed plans as an electronic pdf format. Provide GIS coordinates for all as-constructed utility manholes, valve boxes, curb stops, hydrants, and cleanout in AutoCad format.

    S-H Response: This comment has been noted for future inclusion as part of the construction and closeout process.

11. Provide and install Watts RPZ backflow assembly for water service inside the building.

    S-H Response: This comment has been noted and sent to the plumbing engineer for inclusion in construction documents.

12. Label contacts for inspection and utilities, as follows:

    Water and Sewer, Keith Vitzthum, City of Huxley, 515-290-7512
    Gas and Electric, Jacob Clark, Alliant Energy, 515-268-4412
    Phone and Cable, Brant Strumpfer, Huxley Communications, 515-203-6716

    S-H Response: Contacts have been included on Cover Sheet – C000.

13. Provide traffic analysis in accordance with City Ordinance 167.04.1.B. This may not be necessary depending on anticipated traffic. Please provide information on the anticipated number of truck deliveries and time of day they are anticipated. Also, the number of passenger vehicles anticipated in any given day.

    S-H Response: Working with Owner to get expected traffic loads.

14. Show P.U.E. and other easements from the Industrial Final Plat on the site plan.

    S-H Response: Base map has been updated to include P.U.E and other easements from the Industrial Final Plat.

15. Provide building dimensions and building square footage.

    S-H Response: Building dimensions and square footage has been updated on Sheet C101 – Site Plan.

16. Provide elevation view of the building showing building dimension, height, and materials.

    S-H Response: Building elevations are included as an attachment to this submittal.

17. All parking areas are to be surfaced with asphalt or concrete. The east lot will need to be paved with hard surfacing or have a waiver requested of the City Council.

    S-H Response: Working with Owner to resolve.

18. Provide lighting plan.

    S-H Response: Does this item relate to a photometric item being required?

19. All of the areas on the site located south and east of the building need to drain into the northeast stormwater detention basin. This includes all of drainage area DA-3 shown in the stormwater drainage calculations. Drainage DA-3 cannot drain off-site.

    S-H Response: Grading of site has been reworked to accommodate drainage from South and East of the building to the NE detention basin.

20. The maximum total allowable release rate from the site for both detention basins is 1.5 cfs. See the attached stormwater management plan for the Huxley Industrial Park dated January 17, 2006.

    S-H Response: Stormwater report is being reviewed to ensure total release rate is met.

21. Revise and re-submit the stormwater management calculations for the site.

    S-H Response: Stormwater management report has been updated including associated calculations.

22. The embankment width for the detention basins need to be minimum of 6 feet wide in accordance with SUDAS Design Manual Section 2G-1F.1.c.

    S-H Response: Embankment width has been updated to meet SUDAS requirements.

23. The freeboard and emergency spillway requirements of SUDAS Design Manual Section 2G-1.F.1.d.

    S-H Response: Freeboard and emergency spillway requirements are being reviewed to ensure SUDAS requirements are being met.

24. The west stormwater detention basin needs to be contained within the site and not extend in the public right-of-way. The sidewalk also cannot pass through the stormwater detention basin.

    S-H Response: West stormwater basin is updated and contained within the site.

25. The building downspouts cannot be directly tied to the storm sewer. They need to flow overland to the detention basin.

    S-H Response: This item is being discussed with the Owner. Overland flowing of downspouts across exits and hard surfacing can create unsafe surfaces during cold weather with ice.

Thank you for the review of our project.

SHIVE-HATTERY, INC.

Brent Strauch, PE

Enc: Architectural Elevations

Cc: Rita Conner, City of Huxley
Jeff Peterson, City of Huxley
Amy Kaplan, City of Huxley
Chris Bauer, Shive-Hattery