



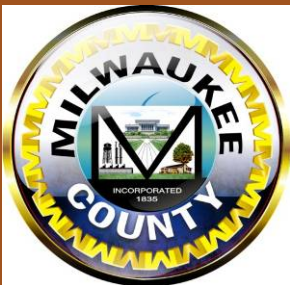
Engberg Anderson
MILWAUKEE • MADISON • TUCSON



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Engineers, Scientists and Environmental Management Consultant

O'Donnell Park Parking Structure Façade Improvements

Project Update - Design Development



February 28, 2011

Design Development

Base Bid

- Exposed Structure
- Minimal Treatment

Add-Alternate

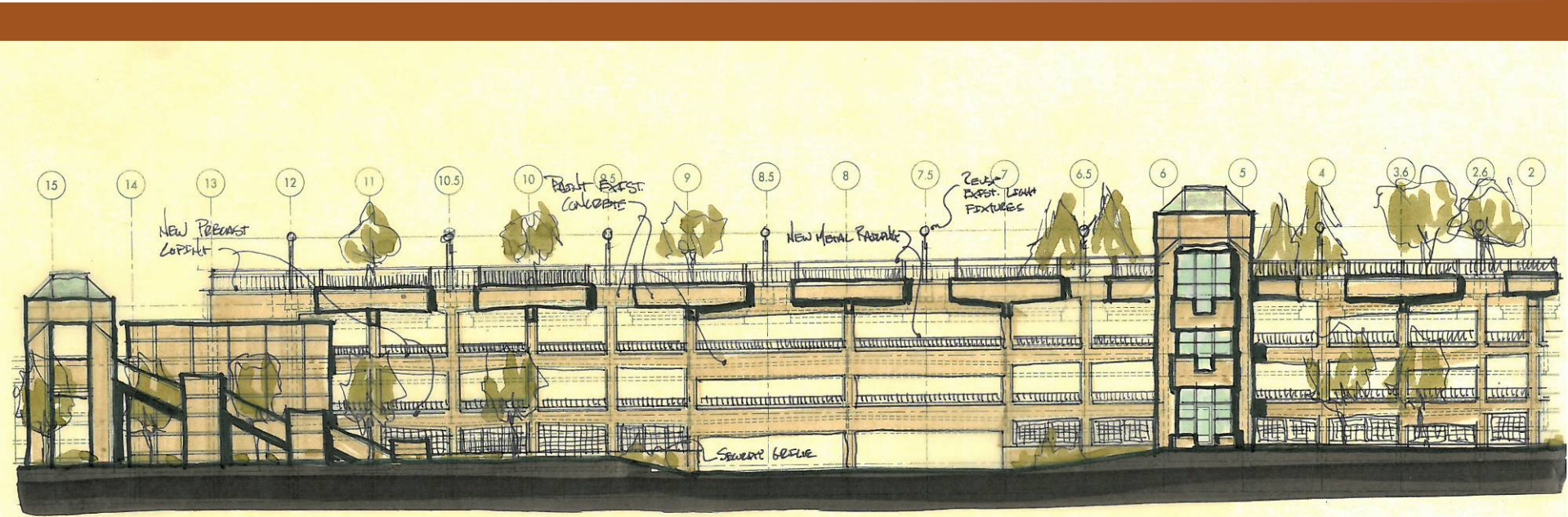
- Metal Panel



O'Donnell Park Parking Structure Façade Improvements

Initial Concept – Exposed Structure

Concept Sketch



Design Development

Base Bid- Exposed Structure

- Patch Concrete
- Cementitious Finish System
- Precast Coping at Plaza Level
- Metal Coping at Parapets
- Metal Guardrail at Plaza Level
- Vehicular Barrier Cable System
- Security Grille at Lincoln Mem. Dr.
- Reinstall Existing Lighting



Base Bid – Exposed Structure

Concept Perspective



O'Donnell Park Parking Structure Façade Improvements

Direct Applied Finish System

- Concrete Substrate Preparation
 - Patch and repair deteriorated concrete
 - Remove fins, grind down formwork remnants
 - Fill voids, honeycombs, and cracking
 - Apply bonding agent – bonds new concrete to existing
- Finish System (STO, Dryvit, etc.)
 - Base Coat – levels out surface imperfections
 - Top Coat – with fiberglass mesh to provide tensile strength
 - Finish Coat – Textured coating with integral color

Base Bid – Exposed Structure

Existing Concrete Conditions



O'Donnell Park Parking Structure Façade Improvements

Base Bid – Exposed Structure

Existing Concrete Conditions



O'Donnell Park Parking Structure Façade Improvements

Base Bid – Exposed Structure

Stucco Concept



- Column Face
- Spandrel Face
- Parapet Face
- Beam Returns
- Corbels

O'Donnell Park Parking Structure Façade Improvements

Base Bid – Exposed Structure

Stucco Concept



- Column Returns
- Overlook Soffits

O'Donnell Park Parking Structure Façade Improvements

Maintenance Considerations

- Textured surface captures dirt – pressure wash as needed
- Limited ability to accommodate deflection – repair cracking as needed
- Anticipated Life Cycle of approximately 10 years - system will require re-surfacing / repainting
- Application is weather dependant
- 3 year limited materials warranty

Design Development

Add-Alt. – Metal Panel

- Minimal Concrete Patching
- Aluminum Perforated Metal Panel System
- Glazing System at Entry
- Precast Coping at Plaza Level
- Metal Guardrail at Plaza Level
- Vehicular Barrier Cable System
- Security Grille at Lincoln Mem. Dr.
- Reinstall Existing Lighting



Metal Panel System

- Concrete Substrate Preparation
 - Patch and repair deteriorated concrete
- Metal Panel System (Dri-Design)
 - Perforated Aluminum Panels on Aluminum Framing – attached to existing concrete structure with stainless steel brackets
 - Solid Aluminum Panels on Galvanized CFMF at Overlooks
 - Dri-Design headquarters in Holland, MI – panels are fabricated and finished in Wausau, WI.
 - Panels have 20% combined Recycled Content
 - Painted Finish

Add-Alternate – Metal Panel

Color Options – Dark Bronze



O'Donnell Park Parking Structure Façade Improvements

Add-Alternate – Metal Panel

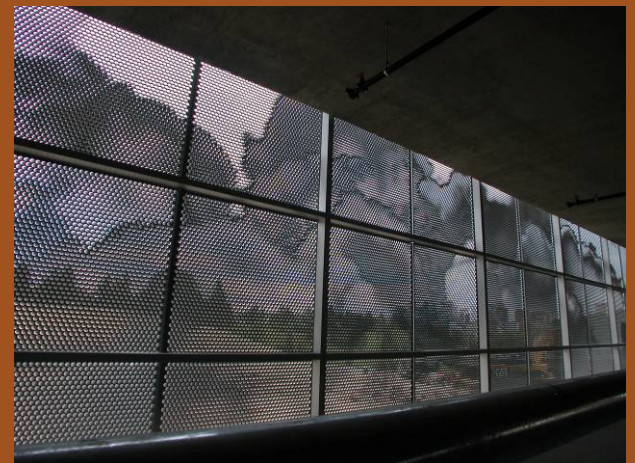
Color Options – White Powder Coated



O'Donnell Park Parking Structure Façade Improvements

Add-Alternate – Metal Panel

Metal Panel Examples



O'Donnell Park Parking Structure Façade Improvements

Maintenance Considerations

- Aluminum Panels and Frames require minimal maintenance – pressure wash as needed
- Modular System allows broken panels to be removed
- Painted – 20 year finish warranty

Construction Budget

Phase I - Façade Removal Contract Amount:	Estimated Cost
	\$538,443.00

Phase II - Façade Improvements

Base Bid - Exposed Structure

	Unit Cost	Area		Estimated Cost
Concrete Patching	\$150.00	1,500 SF		\$225,000.00
Cementitious Finish	\$25.00	15,719 SF		\$392,975.00
Weather Protection			LS	\$75,000.00
Precast Coping	\$45.00	1,115 LF		\$50,175.00
Metal Coping	\$30.00	818 LF		\$24,540.00
Metal Guardrail	\$135.00	1,087 LF		\$146,745.00
Vehicle Barrier	\$125.00	957 LF		\$119,625.00
Security Grille	\$65.00	2,958 SF		\$192,270.00
Reinstall Lighting	\$6,000.00	14 EA		\$84,000.00
		Total:		\$1,310,330.00
		Phase I & II Total:		\$1,848,773.00

Add Alternate - Metal Panel

Perforated Panel	\$32.00	9,660 SF		\$309,120.00
Aluminum Framing	\$26.00	9,660 SF		\$251,160.00
Solid Panel	\$32.00	9,196 SF		\$294,272.00
Galvanized Framing	\$10.00	9,196 SF		\$91,960.00
Foundation for Entry Glazing	\$12,000.00	3 EA		\$36,000.00
Entry Glazing	\$100.00	2,176 SF		\$217,600.00
Entry Framing	\$40.00	2,176 SF		\$87,040.00
Concrete Patching	\$150.00	500 SF		\$75,000.00
Precast Coping	\$45.00	1,115 LF		\$50,175.00
Metal Guardrail	\$135.00	1,087 LF		\$146,745.00
Vehicle Barrier	\$125.00	957 LF		\$119,625.00
Security Grille	\$65.00	2,958 SF		\$192,270.00
Reinstall Lighting	\$6,000.00	14 EA		\$84,000.00
		Total:		\$1,954,967.00
		Phase I & II Total:		\$2,493,410.00

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